
**QUARTERLY MONITORING REPORT
ACTIVE TREATMENT SYSTEMS
FOURTH QUARTER 2008**

**AMERICAN CHEMICAL SERVICE NPL SITE
GRIFFITH, INDIANA**

MWH File No. 4050577

Prepared For:

**American Chemical Service NPL Site RD/RA Executive Committee
Griffith, Indiana**

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April 2009

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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
ACRONYMS AND ABBREVIATIONS	iv
1.0 INTRODUCTION	1
2.0 GWTP COMPLIANCE MONITORING	3
2.1 SAMPLING REQUIREMENTS	3
2.2 EFFLUENT SAMPLING AND ANALYSES	3
2.3 EFFLUENT ANALYTICAL RESULTS.....	4
2.4 ANNUAL SEDIMENT SAMPLE ANALYTICAL RESULTS	4
3.0 ISVE SYSTEM MONITORING	6
3.1 THERMAL OXIDIZER OFF-GAS SAMPLING.....	6
3.2 SAMPLING RESULTS	6
3.3 ISVE SYSTEM MONITORING	7
3.4 PRODUCT REMOVAL ACTIVITIES	7
4.0 GWTP PROCESS MODIFICATIONS AND REPAIRS	9
4.1 GWTP PROCESS MODIFICATIONS.....	9
4.2 GWTP REPAIRS AND MAINTENANCE	9
5.0 ISVE PROCESS MODIFICATIONS AND REPAIRS.....	10
5.1 ISVE PROCESS MODIFICATIONS	10
5.2 ISVE REPAIRS AND MAINTENANCE.....	10
6.0 PGCS AND BWES GAUGING ACTIVITIES	11
7.0 SYSTEM OPERATION	13
8.0 CONCLUSIONS AND RECOMMENDATIONS	14
8.1 GWTP OPERATION.....	14
8.2 ISVE OPERATION	14
8.3 GROUNDWATER LEVEL MONITORING	15
8.4 HEALTH AND SAFETY	16
9.0 REFERENCES	17

TABLES

Table 2.1	Groundwater Treatment System Effluent Discharge Limits
Table 2.2	Summary of Effluent Analytical Results – Fourth Quarter 2008; Groundwater Treatment System
Table 2.3	Summary of Sediment Analytical Results
Table 3.1	Thermal Oxidizer 1 Results for Method TO-15 (VOCs) – October 2008
Table 3.2	Thermal Oxidizer 1 Results for Method TO-15 (VOCs) – November 2008
Table 3.3	Thermal Oxidizer 1 Results for Method TO-15 (VOCs) – December 2008
Table 3.4	Thermal Oxidizer 2 Results for Method TO-15 (VOCs) – October 2008
Table 3.5	Thermal Oxidizer 2 Results for Method TO-15 (VOCs) – November 2008
Table 3.6	Thermal Oxidizer 2 Results for Method TO-15 (VOCs) – December 2008
Table 3.7	SBPA and Off-Site ISVE System Results for Method TO-15 (VOCs) - October 2008
Table 3.8	SBPA and Off-Site ISVE System Results for Method TO-15 (VOCs) - November 2008
Table 3.9	SBPA and Off-Site ISVE System Results for Method TO-15 (VOCs) - December 2008
Table 3.10	Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) – October 2008
Table 3.11	Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) – November 2008
Table 3.12	Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) – December 2008
Table 3.13	Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) – October 2008
Table 3.14	Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) – November 2008
Table 3.15	Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) – December 2008
Table 3.16	SBPA and Off-Site ISVE System Results for Method TO-13 (SVOCs) - October 2008
Table 3.17	SBPA and Off-Site ISVE System Results for Method TO-13 (SVOCs) - November 2008
Table 3.18	SBPA and Off-Site ISVE System Results for Method TO-13 (SVOCs) - December 2008
Table 3.19	Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data – Fourth Quarter 2008
Table 3.20	Off-Site In-Situ Soil Vapor Extraction (ISVE) System Header Monitoring Data – Fourth Quarter 2008
Table 3.21	SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data – Fourth Quarter 2008
Table 3.22	SBPA In-Situ Soil Vapor Extraction (ISVE) System Header Monitoring Data – Fourth Quarter 2008
Table 6.1	Water Table Elevations Across the Barrier Wall and Near the PGCS –Fourth Quarter 2008
Table 6.2	Water Levels Inside Barrier Wall – Fourth Quarter 2008

FIGURES

- Figure 2.1 Annual Sediment Sample Collection Location
Figure 3.1 VOC Removal Rate
Figure 3.2 Total VOCs Removed
Figure 6.1 Water Table Elevations Near the PGCS – December 2008
Figure 6.2 Water Table Elevations Across the Barrier Wall – December 2008
Figure 6.3 Groundwater Level Measuring Locations
Figure 6.4 Water Level Trends Inside the Barrier Wall (Still Bottoms Pond Area)
Figure 6.5 Water Level Trends Inside the Barrier Wall (Off-Site Area)

APPENDICES

- Appendix A Effluent Analytical Data
 - October 15, 2008 Compliance Sample – Laboratory Results
 - November 18, 2008 Compliance Sample – Laboratory Results
 - December 29, 2008 Compliance Sample – Laboratory Results
- Appendix B Thermal Oxidizer Off-Gas Analytical Data
 - November 21, 2008 Off-Gas Sample Laboratory Results
 - December 11, 2008 Off-Gas Sample Laboratory Results
- Appendix C Annual Sediment Sample Analytical Data – November 25, 2008

ACRONYMS AND ABBREVIATIONS

AS	Air Sparge
AMSL	Above Mean Sea Level
BOD	Biological Oxygen Demand
BW	Barrier Wall
BWES	Barrier Wall Extraction System
cfm	cubic feet per minute
DL	Detection Limit
DPE	Dual Phase Extraction
GAC	Granular Activated Carbon
Global	Global Technologies
GWTP	Groundwater Treatment Plant
"Hg	Inches of mercury
"H ₂ O	Inches of water
IDEM	Indiana Department of Environmental Management
K-P	Kapica-Pazmey
lb/hr	Pounds per hour
LDC	Laboratory Data Consultants
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NC	Not Calculated
ND	Not Detected
NE	No Effluent Limit Established
NS	Not Sampled
OFCA	Off-Site Containment Area
PCBs	Polychlorinated Biphenyls
ppm	Parts per million
PGCS	Perimeter Groundwater Containment System
PSVP	Performance Standard Verification Plan
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
SBPA	Still Bottoms Pond Area
SVOC	Semi-Volatile Organic Compounds
T-102	Aeration Equalization Tank (Tank – 102)
TOC	Top of Casing
TOIC	Top of Inner Casing
TOSG	Top of Staff Gauge
TSS	Total Suspended Solids
µg	Micrograms
µg/L	Micrograms per liter
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

1.0 INTRODUCTION

MWH Americas, Inc. (MWH), on behalf of the American Chemical Service (ACS) Executive Committee, started up the on-site groundwater treatment system at the ACS National Priorities List (NPL) Site (ACS Site) in Griffith, Indiana on March 13, 1997. The groundwater treatment plant (GWTP) system was designed to treat groundwater from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The original treatment consisted of a phase-separator for oil and free product removal, equalization tanks, an UV oxidation unit for destruction of organic constituents, and an air stripper to remove methylene chloride and other organics. The treatment also included a chemical precipitation and clarification unit to remove metals, a sand filter to remove suspended solids, and activated carbon vessels for final polishing of the treated groundwater before it was released to the west of the Site.

In 2001, an activated sludge treatment unit was added to the process to reduce the volatile and semivolatile organic compounds (VOCs and SVOCs) in the collected groundwater. The activated sludge treatment process also reduces the amount of activated carbon required to treat the water. An aerated equalization tank was also added to the GWTP in 2001 to remove VOCs from the collected groundwater, oxidize metals to increase metals removal efficiency in the chemical precipitation unit, and equalize groundwater flow through the GWTP. The activated sludge system and aeration tank have been fully integrated into the process along with the other upgrade components. Startup and optimization of the catalytic oxidizer/scrubber air treatment unit was also conducted during 2001.

The treated effluent from the treatment system is discharged to the nearby wetlands, west of the treatment system, in accordance with Agency approvals.

Operation of the In-situ Soil Vapor Extraction (ISVE) system for the Off-Site Containment Area (OFCA) and the Kapica-Pazmey (K-P) Area began on May 1, 2002. Operation of the ISVE system for the Still Bottoms Pond Area (SBPA) began in July 2003. The ISVE systems were designed to remove volatile and semi-volatile compounds from the subsurface media.

The Off-Site Area ISVE system consists of 42 ISVE wells, 3 air sparge wells, ISVE and air sparge blower systems, a thermal oxidizer/scrubber unit, and the associated mechanical and electrical components. Protocols and goals for the phased startup of the Off-Site System as defined in the Final Remedy (Montgomery Watson, 1999) were followed. In 2004, an additional blower unit was added to the Off-Site Area ISVE system to more effectively meet the design objectives of the system. The additional blower increased the capacity of the Off-Site ISVE system from 1,000 to 2,000 cubic feet per minute (cfm).

The SBPA ISVE system consists of 25 ISVE wells, 21 dual-phase extraction (DPE) wells, 6 air sparge wells, ISVE and air sparge blower systems, a thermal oxidizer/scrubber unit, and the associated mechanical and electrical components. During the first 12 months of system operation, the performance of the ISVE system was evaluated. Based on this evaluation, the

SBPA ISVE system was enhanced in accordance with the United States Environmental Protection Agency (U.S. EPA) and Indiana Department of Environmental Management (IDEM) approval by reconfiguring 18 of the ISVE wells to allow injection of air. Air for the injection wells is directed from blower ME-102/103 at the GWTP to the SBPA ISVE blower shed. The air injection system, which consists of three groups of five injection wells, began operation in December 2005. The air injection is rotated among the three well groups on a monthly basis. Only one well group is operated at a time.

This report summarizes GWTP effluent analytical data and thermal oxidizer off-gas analytical data, ISVE process monitoring data, and water level gauging data collected from October 2008 through December 2008. The report also details modifications and upgrades that were made to the active treatment systems during the reporting period.

2.0 GWTP COMPLIANCE MONITORING

2.1 SAMPLING REQUIREMENTS

Effluent samples are collected on a regular schedule from the treatment system to demonstrate compliance with the discharge limits (**Table 2.1**) established by the Indiana Department of Environmental Management (IDEM) and the United States Environmental Protection Agency (U.S. EPA). The approved Performance Standard Verification Plan for the PGCS (PSVP) (Montgomery Watson, July 1997) requires quarterly effluent sampling for biochemical oxygen demand (BOD), total suspended solids (TSS), SVOCs, metals, and polychlorinated biphenyls (PCBs) in the system, and monthly effluent sampling for pH and VOCs, as tabulated below. In accordance with the PSVP, a full analysis effluent compliance sample was collected during November 2008 and analyzed for all of the analytes listed above. During October and December 2008, the monthly effluent compliance samples were analyzed for VOCs and pH only also in accordance with the PSVP.

Sampling and analyses were performed in accordance with the approved Quality Assurance Project Plan (QAPP) (Montgomery Watson Harza, November 2001) during the reporting period. Quality control measures were also instituted in accordance with the PSVP. The following table and paragraphs present details on sampling and analyses and also summarize the analytical data for the treatment system effluent.

Sampling Frequency Schedule – Groundwater Treatment System

Analytes	Cumulative Time From Startup*	Frequency
Flowrate	–	Continuous
BOD, TSS, SVOCs and Metals	181 days onward	Once per quarter
VOCs and pH	31 days onward	Once per month
PCBs	181 days onward	Once per quarter
PCBs in Sediment (one location)	–	Once per year

*Note: System operation began on March 13, 1997

2.2 EFFLUENT SAMPLING AND ANALYSES

Effluent samples were collected each month during the fourth quarter of 2008. Samples were collected on the following dates and analyzed for the listed analytes for this reporting period:

- | | |
|-------------------|--|
| October 15, 2008 | pH and VOCs |
| November 18, 2008 | Full analysis (pH, TSS, BOD, Metals, VOCs, SVOCs, pentachlorophenol, and PCBs) |
| December 29, 2008 | pH and VOCs |

The above samples were collected directly from a sampling port on the effluent line of the treatment system. The samples were placed in contaminant-free containers, in accordance with the *U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers* (U.S. EPA, 1992). Appropriate sample containers and preservatives, as specified in the QAPP, were used to collect and preserve the samples. Following sample collection, the temperature of the sample containers was maintained at or below 4° C in coolers. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment system to the laboratories. In accordance with the approved QAPP, the effluent water samples were analyzed for the following parameters by the following analytical methods:

<u>Parameter</u>	<u>Analytical Method</u>
VOCs	SW-846 8260B
SVOCs	SW-846 8270C
Pentachlorophenol	SW-846 8270C and SIM
Pesticides/PCBs	EPA 608/SW-846 8081/8082
Metals (Excluding Mercury)	
General Water Quality	SW-846 6010
Parameters (TSS and BOD-5)	EPA 160.2 and 405.1
Mercury	SW-846 7470
pH	EPA 150.1

2.3 EFFLUENT ANALYTICAL RESULTS

2.3.1 GWTP Effluent Samples

The GWTP effluent monitoring data summarized in [Table 2.2](#), verify that the system effluent was compliant with the discharge limits summarized in [Table 2.1](#). No effluent exceedences were reported in the October, November, or December samples.

Microbac Laboratory of Merrillville, Indiana performed the analysis of the samples. Laboratory Data Consultants (LDC) of Carlsbad, California performed third party data validation in accordance with the U.S. EPA National Functional Guidelines for Organic/Inorganic Data Review (U.S. EPA, February 1994 and October 1999). Validation qualifiers are listed in [Table 2.2](#) and are written in the margin of the analytical data sheets provided in [Appendix A](#).

2.4 ANNUAL SEDIMENT SAMPLE ANALYTICAL RESULTS

Since 1998, MWH has collected an annual sediment sample and associated quality control samples from the GWTP outfall in accordance with the PSVP to help determine if PCB accumulation is occurring at the GWTP discharge location. The annual sediment sample for 2008 was collected on November 25th from the GWTP outfall location, shown on [Figure 2.1](#). The sample was analyzed for PCBs by Microbac and the data was validated by LDC.

The analytical data for the annual sediment samples for the past eight years are summarized in **Table 2.3**. Analytical data for the November 2008 sample are included in **Appendix C**. Two aroclors, Aroclor-1248 and Aroclor-1254, were detected in the November 2008 duplicate sample at concentrations of 580 ug/kg and 280 ug/kg, respectively. These concentrations are below the action level of 1,000 ug/kg. They are also within the range of background PCB concentrations as determined in the Remedial Investigation. MWH will continue to collect annual sediment samples at the GWTP discharge location to monitor any possible PCB accumulation.

3.0 ISVE SYSTEM MONITORING

3.1 THERMAL OXIDIZER OFF-GAS SAMPLING

During the fourth quarter of 2008, Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1) was used to treat vapors from the SBPA ISVE system and Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2) was used to treat vapors from the Off-Site ISVE system and T-102. Monthly VOC removal rates are illustrated in [Figure 3.1](#) and the total VOCs removed are shown on [Figure 3.2](#). Compliance samples were collected from the thermal oxidizer/scrubber units on November 21st and December 11th. No samples were collected in October 2008 because the systems were inoperable while maintenance was being conducted at the GWTP. In addition, no samples were collected from Therm Ox 2 in December due to the unit being down for repairs.

Influent and effluent off-gas samples were collected directly from sampling ports on the influent pipe to the thermal oxidizer and the discharge stack of the scrubber. One influent sample and one effluent sample were collected. A duplicate influent sample was also collected. The samples were collected to comply with the PSVP and QAPP and in accordance with laboratory guidelines. The VOC samples were collected using a Summa canister and the SVOC samples were collected in sorbent tubes.

Sampling Frequency Schedule – ISVE System

Startup	Weekly for a four week period
Post-Startup	Monthly in accordance with the IDEM Air Permit Equivalency

Following sample collection, the sorbent tubes were placed in coolers and maintained at or below 4°C for shipment. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment plant to the laboratories for extraction and analysis. In accordance with the approved QAPP and addenda, the off-gas samples were analyzed by the following analytical methods:

<u>Parameter</u>	<u>Analytical Method</u>
VOCs	TO-15
SVOCs	TO-13

Per Addendum No. 1 to the QAPP, Microbac Laboratory of Merrillville, Indiana is now the primary analytical laboratory for air analyses for the project. Microbac performs VOC analysis by Method TO-15.

3.2 SAMPLING RESULTS

The influent and effluent off-gas data are collected to verify that the off-gas from both of the thermal oxidizers was less than the IDEM discharge limit of three pounds of VOCs per hour

(lbs/hr) and 15 pounds per day (lbs/day) for October, November, and December. The highest VOC discharge rate observed during these sampling events was the November 21, 2008 Therm Ox 2 sample, which was measured at 0.114 pounds per hour or 2.74 pounds per day. Both of these rates are below the corresponding discharge limits. Therefore, it can be concluded that the ISVE systems are performing well within discharge limits for air emissions.

VOC discharge values for Therm Ox 1, Therm Ox 2, and the SBPA and Off-Site ISVE system are presented in [Tables 3.1 through 3.9](#). The analytical data sheets for the compliance samples are provided in [Appendix B](#). In addition to the off-gas data collected during the fourth quarter, MWH collected off-gas samples from the Off-Site ISVE system and the SBPA ISVE system influent lines. These samples were collected in order to comply with the PSVP. No off-gas samples were collected from the ISVE systems in October 2008 because neither system was operating while maintenance was being conducted at the GWTP. In addition, no off-gas samples were collected from the Off-Site ISVE system in December due to required repairs being performed on Therm Ox 2.

Microbac Laboratory of Merrillville, Indiana analyzed all of the vapor samples. The analytical results are summarized in [Tables 3.1 through 3.18](#). Laboratory Data Consultants (LDC) of Carlsbad, California performed third party data validation in accordance with the QAPP and the National Functional Guidelines for Organic/Inorganic Data Review. Validation qualifiers are listed in the tables and are written in the margin of the analytical data sheets provided in [Appendix B](#).

3.3 ISVE SYSTEM MONITORING

Performance monitoring of the ISVE system was conducted in accordance with the PSVP (Montgomery Watson, June 1999). Extracted vapor flow rates and vacuum pressures at individual ISVE wells and headers were measured and recorded on a routine basis. Additionally, VOC concentrations were measured at individual wells and headers using a photoionization detector (PID). ISVE system monitoring was not conducted in October 2008 because the systems were inoperable while maintenance was being conducted at the GWTP.

The information collected during performance monitoring is used to evaluate and optimize the ISVE system. Data collected from the Off-Site ISVE system during the fourth quarter of 2008 are presented in [Tables 3.19 and 3.20](#). Data that were collected from the SBPA ISVE system during the fourth quarter of 2008 are presented in [Tables 3.21 and 3.22](#).

3.4 PRODUCT REMOVAL ACTIVITIES

MWH performed product removal activities at the target wells in the SBPA and Off-Site Area in October. A diaphragm pump was used to transfer free product to a portable tank. After removal, the free product was stored at the GWTP in Tank T-6. The vapors that

volatilized from the free product were sent to the thermal oxidizer units where they were destroyed. The residual free product will be disposed of off-site with the rest of the hazardous solid waste stream.

4.0 GWTP PROCESS MODIFICATIONS AND REPAIRS

4.1 GWTP PROCESS MODIFICATIONS

The following modification was made to the GWTP during the fourth quarter of 2008:

- Beginning in November 2008, the operation of the activated sludge unit (biotank) was isolated to the smaller zone. This modification involved the shutdown of one large blower, resulting in net energy savings for the plant. The biotank removal efficiencies were not significantly affected by this operational change except for an increase in the suspended solids concentration in the biotank effluent. This increase appears to stem from a high solids concentration in the seed sludge. In turn, sludge withdrawals from the biotank were conducted, which brought down the solids concentrations to normal levels. Currently, the biotank operation has stabilized and is performing well.

4.2 GWTP REPAIRS AND MAINTENANCE

The following maintenance activities were conducted at the GWTP during the fourth quarter of 2008:

- The GWTP was shut down on October 8, 2008 for routine annual maintenance. This year's event included a thorough cleaning and maintenance of the activated sludge plant. The influent pumping system was re-started in recirculation mode on November 6th and the GWTP began normal treatment operation and discharge to the wetlands on November 13th.

5.0 ISVE PROCESS MODIFICATIONS AND REPAIRS

5.1 ISVE PROCESS MODIFICATIONS

The following modifications were made to the SBPA ISVE system during the fourth quarter of 2008:

- One set of air injection wells was operated at the ACS site throughout the fourth quarter of 2008. MWH has maintained the well configuration put into effect on August 29, 2008. This configuration consists of a combination of air injection wells from Groups 1 and 2 (SVE-54, SVE-59, SVE-77, SVE-80, and SVE-84) to target areas of the subsurface with higher VOC concentrations. In addition, the SBPA ISVE system continues to operate with four air sparge points active.
- MWH will continue to evaluate the data collected during the monthly monitoring events to determine whether the current well configuration provides increased VOC removal or if it would be more beneficial to resume rotating among the three groups of air injection wells on a monthly basis.

No modifications were made to the Off-Site ISVE system during the fourth quarter of 2008.

5.2 ISVE REPAIRS AND MAINTENANCE

- Annual maintenance was conducted on Therm Ox 1 and Therm Ox 2 during October and November. The units returned to normal operation on November 13, 2008.
- Therm Ox 2 was shut down on December 10, 2008 due to a failure of the blower impeller and housing. The unit returned to normal operation on January 27, 2009.

6.0 PGCS AND BWES GAUGING ACTIVITIES

During the operational time frame of the GWTP in the fourth quarter of 2008, the PGCS groundwater extraction trenches were operated in “auto” mode. In “auto” mode, the PGCS extraction wells pump continuously unless there is a low water level in individual extraction wells or a high water level in the Aeration Equalization Tank (T-102). This mode is used to control the flowrate through the treatment system, while at the same time creating an inward gradient along the PGCS trench. The GWTP also received influent from the On-Site and Off-Site components of the BWES, the SBPA DPE wells, MW-10C, MW-56, and the Lower Aquifer Pumping System during the fourth quarter of 2008.

In accordance with the PSVP, a discussion on the effect of the PGCS and BWES on the water table near the Site is presented in each quarterly monitoring report. This section summarizes the groundwater elevations at the Site during October, November, and December 2008. Groundwater elevation measurements were collected throughout the Site on December 11, 2008 as part of the groundwater monitoring program. The groundwater elevations are listed in **Table 6.1** and the resulting water table contours outside the barrier wall are shown on **Figure 6.1**.

The barrier wall was constructed to contain the contaminated zone under the Site and the BWES was installed to extract groundwater from within the barrier wall and dewater the Site for the ISVE system. Nine pairs of piezometers were installed, with one piezometer of each pair on either side of the barrier wall, spaced along the barrier wall alignment. This allows measurement and tracking of water levels in order to document that the barrier wall is serving its designed function.

Table 6.1, BWES Water Level and Piezometer Pairs, presents the groundwater elevations inside and outside the barrier wall on December 11, 2008. The groundwater elevations are plotted on **Figure 6.2**. The groundwater elevation measurements inside the barrier wall range from 2.65 feet to 7.63 feet lower than levels outside the barrier wall. In general, the data demonstrates that the barrier wall is successfully performing the intended function of isolating and protecting the groundwater outside the barrier wall from the source areas of the Site inside the barrier wall. MWH will continue to collect water level measurements quarterly across the Site as required in the PSVP.

As part of the optimization of the GWTP and BWES upgrades, MWH began active dewatering of the Off-Site Area through increased groundwater pumping rates on September 25, 2001. Active dewatering of the SBPA (On-Site Area) began on February 11, 2003 with the addition of the DPE wells. Water levels were measured throughout the quarter at piezometer locations (P29, P31, P32, P36, and P49) in the On-Site Area and at piezometers (P96, P110, P112, P113, P114, P116, P118) and three air sparge (AS) wells (AS-7, AS-8, and AS-9) in the Off-Site Area. These locations are shown on **Figure 6.3**. The water level trend data from these piezometers and AS wells for the fourth quarter of 2008 are depicted graphically on **Figures 6.4** and **6.5**, which also show the target water elevations for each area. In the SBPA, the target water level is 629 feet amsl. Water

levels in two piezometer locations (P-29 and P-31) have been drawn down to below the bottom of the screens in these wells throughout the fourth quarter of 2008. Therefore, the depth to water measurements at these locations show straight-line measurements of the bottom of the wells. The other locations had water levels that varied from approximately 625 feet amsl to 631 feet amsl. These water levels represent an increasing trend from the third quarter of 2008. This increasing trend is likely due to reduced pumping rates as a result of downtime of the GWTP. Water levels began to show a decreasing trend toward the end of the fourth quarter as a result of the GWTP returning to normal operation.

In the Off-Site ISVE area, the target water level is 626 feet amsl. Actual water levels varied from approximately 621 feet amsl to 628 feet amsl. Average water levels in the Off-Site area showed a slightly decreasing trend throughout the fourth quarter of 2008.

MWH will continue to monitor the water levels in both the SBPA and Off-Site Area to ensure vapor extraction at the ISVE wells is not inhibited.

7.0 SYSTEM OPERATION

The GWTP operated as designed 78 percent of the fourth quarter of 2008. The system drew influent water from the On-Site Area BWES, the Off-Site Area BWES, the PGCS, MW-10C, MW-56, and the Lower Aquifer Pumping System. The downtime was associated with the annual maintenance event.

The Off-Site Area ISVE system continued to operate as designed 23 percent of the fourth quarter of 2008 (based on 485 hours of operation out of a total of 2,112 hours). The SBPA ISVE system continued to operate as designed 39 percent of the fourth quarter of 2008 (based on 825 hours of operation out of a total of 2,112 hours). The majority of the downtime for the ISVE systems was associated with the annual maintenance event of the thermal oxidizers and GWTP.

8.0 CONCLUSIONS AND RECOMMENDATIONS

This section provides a summary of the operational status of the active remedial systems at the ACS NPL site for the subject period. Anticipated activities for the upcoming quarter and recommendations for system modifications are also provided.

8.1 GWTP OPERATION

The GWTP continued to operate normally during the fourth quarter of 2008. Operation of the activated sludge plant was reduced from the large and small aeration zones to just the small zone. MWH performed routine annual maintenance activities at the GWTP during the fourth quarter which consisted of a thorough cleaning and maintenance of the activated sludge plant.

The GWTP continued to treat water from all available sources. The list of sources was expanded in September 2007 with the completion of the Lower Aquifer Pumping System and the replacement of the pump in MW-10C.

8.2 ISVE OPERATION

The ISVE systems continued to operate normally during the fourth quarter of 2008 with the exception of limited operating times for both systems. The operational time of both systems was decreased as a result of annual maintenance activities conducted on both thermal oxidizers during October and November. In addition, Therm Ox 2 did not operate for a majority of December due to required repairs. MWH will continue to perform O&M services on the thermal oxidizer units to ensure adequate operational time for the ISVE systems. As shown in [Figure 3.1](#), the VOC removal rates (in pounds per day) were observed to be within the range previously observed.

While performance data for the ISVE systems indicates that the systems continue to be effective in treating the vadose zone soils, the data also suggests that the systems could be operated more efficiently. As the remediation has progressed, mass removal rates at some wells have become limited while rates remain higher at other locations. Going forward, MWH will make minor modifications to the operational settings under which the systems operate. Actions will be taken to achieve similar or greater VOC removal rates often at lower costs through reduced energy usage. The objective of alternate configurations would be to achieve one or more of the following objectives:

- To maximize VOC mass removal rates from the target areas;
- To concentrate the operation of the system on wells that are indicating higher levels of VOC concentrations (hot spots);
- To reduce energy (electrical and natural gas) usage rates;
- To reduce the carbon footprint of the active treatment systems;

- To reduce wear and tear on existing equipment.

Alternate system configurations include, but are not limited to:

For the Off-Site System,

1. Shutting down one of the two vacuum extraction blowers and concentrating operation on a reduced number of ISVE wells, excluding wells that are shown to produce lower levels of VOC concentrations.
2. Removing the caps from selected wells to promote increased air flow through the vadose zone soils from the opened wells to adjacent active extraction wells.
3. Combining the extracted vapor stream with the SBPA system in order to use only one thermal oxidizer system.

For the SBPA System,

1. Concentrating operation of the extraction system to a reduced number of ISVE wells, excluding wells that are shown to produce lower levels of VOC concentrations.
2. Removing the caps from selected wells to promote increased air flow through the vadose zone soils from the opened wells to adjacent active extraction wells.
3. Discontinuing the air injection regime at designated wells.
4. Reducing the extraction flow rate.

The configurations listed above are not meant to be comprehensive but represent the types of modifications that MWH may take to improve system efficiency. From time to time, other actions not identified above may be taken to achieve the same objectives. All of the potential actions would be taken in order to accomplish remedial objectives and milestones established by the Record of Decision (ROD).

8.3 GROUNDWATER LEVEL MONITORING

As indicated in Section 6.0, the groundwater extraction system continues to successfully perform its intended function of isolating and protecting the groundwater outside the barrier wall from the source areas of the Site inside the barrier walls.

However, water levels have risen to above target levels in many of the SBPA and Off-Site ISVE wells. In order to decrease these water levels, MWH has contracted Eagle Services to perform liquid removal activities at the Site. Eagle Services started weekly liquid removal from wells with high water or free product levels in January 2009. Liquid is being removed using a vacuum hose that transfers the water and free product into steel drums stored on a trailer. The drums are transported back to the GWTP for treatment.

8.4 HEALTH AND SAFETY

One health and safety incident occurred during the fourth quarter of 2008. On November 11, 2008, an employee of MWH subcontractor, Independent Environmental Services (IES) twisted his ankle after stepping on a hose that was laid on the ground. As a precaution, the worker was sent home for the remainder of the day to rest. He returned the next day to continue the job. Following the incident, the hoses were painted fluorescent orange to allow for better visibility. MWH continues to perform site activities in accordance with the site Health and Safety Plan and all applicable addendums.

Health and Safety statistics for the ACS Site as of December 31, 2008 are:

- 4,239 consecutive days with no lost time due to an accident or Health and Safety incident.
- 1,931 consecutive days without an incident requiring first aid.

9.0 REFERENCES

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2. *Performance Standard Verification Plan, ACS NPL Site*, Montgomery Watson, July 1997.
3. *Performance Standard Verification Plan, ACS NPL Site*, Montgomery Watson, June 1999.
4. *Phase I Technical Memorandum Wetland Investigation, ACS NPL Site*, Montgomery Watson, July 1996.
5. *Phase II Technical Memorandum Wetland Investigation, ACS NPL Site*, Montgomery Watson, February 1997.
6. *Quality Assurance Project Plan, ACS NPL Site*, Montgomery Watson Harza, March 2001.
7. *U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers*, United States Environmental Protection Agency, 1992.
8. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, U.S. EPA, February 1994.
9. *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, U.S. EPA, October 1999.

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TABLES

Table 2.1
Groundwater Treatment System Effluent Discharge Limits
American Chemical Service NPL Site
Griffith, Indiana

Groundwater Quality Parameter	Effluent Standard (Limit)
General Water Quality Parameters	
pH	6 - 9 S.U.
BOD-5	30 mg/L
TSS	30 mg/L
Inorganics	
Arsenic	50 µg/L
Beryllium	NE
Cadmium	4.1 µg/L
Manganese	NE
Mercury ¹	0.02 µg/L (w/DL = 0.64)
Selenium	8.2 µg/L
Thallium	NE
Zinc	411 µg/L
Volatile Organics	
Acetone	6,800 µg/L
Benzene	5 µg/L
2-Butanone	210 µg/L
Chloromethane	NE
1,4 – Dichlorobenzene	NE
1,1 – Dichloroethane	NE
1,2 – Dichloroethene – cis	70 µg/L
Ethylbenzene	34 µg/L
Methylene chloride	5 µg/L
Tetrachloroethene	5 µg/L
Trichloroethene	5 µg/L
Vinyl chloride	2 µg/L
4 – Methyl - 2 – pentanone	15 µg/L
Semi-Volatile Organics	
bis(2 – Chloroethyl) ether	9.6 µg/L
bis(2 – Ethylhexyl) phthalate	6 µg/L
Isophorone	50 µg/L
4 – Methylphenol	34 µg/L
Pentachlorophenol	1 µg/L
PCBs	
PCBs ¹	0.00056 µg/L (w/DL = 0.1 to 0.9)

Notes:

1. Effluent standards for the Groundwater Treatment Plant were established based on maximum contaminant levels, Indiana water quality effluent limits, or best available treatment technologies. However, laboratory equipment could not read down to the effluent standards for mercury or PCBs. Therefore, the lowest equipment detection limit (or limit range for PCBs) for these compounds were established as their respective effluent standards.

NE = No effluent limit established.

DL = Detection limit

S.U. = Standard pH units

µg/L - micrograms per Liter

Table 2.2
Summary of Effluent Analytical Results - Fourth Quarter 2008
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 137 10/15/2008	Month 138 11/18/2008	Month 139 12/29/2008	Effluent Limits	Lab Reporting Limits
pH	7.78 H/J	8.14 H/J	7.03 H/	6-9	none
TSS	NS	1.0 /	NS	30	1.0
BOD	NS	2.0 U/	NS	30	2
Arsenic	NS	7.5 J/UB	NS	50	10
Beryllium	NS	1.0 U/	NS	NE	1.0
Cadmium	NS	2.0 U/	NS	4.1	2.0
Manganese	NS	300 /B	NS	NE	2.0
Mercury ¹	NS	0.2 U/	NS	0.02 (w/DL = 0.64)	0.2
Selenium	NS	30 U/	NS	8.2	30
Thallium	NS	50 U/	NS	NE	50
Zinc	NS	20 U/	NS	411	20
Benzene	1.0 U/	1.0 U/	1.0 U/	5	1.0
Acetone	5.0 U/UJ	5.0 U/UJ	5.0 U/UJ	6,800	5.0
2-Butanone	2.0 U/UJ	2.0 U/UJ	2.0 U/UJ	210	2.0
Chloromethane	2.0 U/	2.0 U/	2.0 U/	NE	2.0
1,4-Dichlorobenzene	1.0 U/	1.0 U/	1.0 U/	NE	1.0
1,1-Dichloroethane	1.0 U/	1.0 U/	1.4 /	NE	1.0
cis-1,2-Dichloroethene	1.0 U/	1.0 U/	2.4 /	70	1.0
Ethylbenzene	1.0 U/	1.0 U/	1.0 U/	34	1.0
Methylene chloride	4.0 U/	2.0 U/	1.5 J/	5	2.0
Tetrachloroethene	1.0 U/	1.0 U/	1.0 U/	5	1.0
Trichloroethene	1.0 U/	1.0 U/	1.0 U/	5	1.0
Vinyl chloride	2.0 U/	2.0 U/	1.3 J/	2	2.0
4-Methyl-2-pentanone	2.0 U/	4.0 U/UJ	1.0 U/	15	2.0
bis (2-Chloroethyl) ether	NS	5.1 U/	NS	9.6	5.1
bis(2-Ethylhexyl) - phthalate	NS	0.73 J/	NS	6	5.1
4 - Methylphenol	NS	5.1 U/	NS	34	5.1
Isophorone	NS	5.1 U/	NS	50	5.1
Pentachlorophenol	NS	26 U/	NS	1	26
PCB/Aroclor-1016 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1221 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1232 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1242 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1248 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1254 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1260 ¹	NS	0.51 U/	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51

Notes:

Bolded result indicates a exceedence of the discharge limit
pH data is expressed in S.U.

BOD and TSS data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

1. Effluent standards for the Groundwater Treatment Plant were established based on maximum contaminant levels, Indiana water quality effluent limits, or best available treatment technologies. However, laboratory equipment could not read down to the effluent standards for mercury or PCBs. Therefore, the lowest equipment detection limit (or limit range for PCBs) for these compounds were established as their respective effluent standards.

ND = Not detected

NS = This analyte was not sampled or analyzed for

NE = No effluent limit established.

DL = Detection limit

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

J = Result is detected below the reporting limit and is an estimated concentration

U = Analyte is not detected at or above the indicated concentration

B = Compound is also detected in the blank

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value, however the calibration was out of range. Therefore the concentration is estimated.

H = Analyte was prepared and/or analyzed outside of the analytical method holding time

UB = Compound or analyte is not detected at or above the indicated concentration due to blank contamination.

Table 2.3
Summary of Sediment Analytical Results
American Chemical Service NPL Site
Griffith, Indiana

PCB Compound	Results (ug/kg)																		
	12/4/98	2/3/00	2/3/00 DUP	8/21/01	8/21/01 DUP	6/5/02	6/5/02 DUP	1/13/04	1/13/04 DUP	9/27/04	9/27/04 DUP	6/15/05	6/15/05 DUP	12/11/06	12/11/06 DUP	4/13/07	4/13/07 DUP	11/25/08	11/25/08 DUP
Aroclor-1016	ND (33)	ND (59)	ND (79)	ND (62) /UJ	ND (71)	ND (52) /UJ	ND (49)	ND (67)	ND (76)	ND (62)	ND (78)	ND (74)	ND (39)	ND (71)	ND (53)	ND (71)	ND (71)	ND (99)	ND (99)
Aroclor-1221	ND (33)	ND (77)	ND (100)	ND (82) /UJ	ND (92)	ND (67) /UJ	ND (64)	ND (84)	ND (95)	ND (84)	ND (110)	ND (100)	ND (53)	ND (100)	ND (76)	ND (100)	ND (100)	ND (99)	ND (99)
Aroclor-1232	ND (33)	ND (59)	ND (79)	ND (62) /UJ	ND (71)	ND (52) /UJ	ND (49)	ND (67)	ND (76)	ND (62)	ND (78)	ND (74)	ND (39)	ND (50)	ND (38)	ND (50)	ND (50)	ND (99)	ND (99)
Aroclor-1242	ND (33)	ND (41)	ND (55)	ND (43) /UJ	ND (49) /UJ	ND (36) /UJ	ND (34)	ND (42)	ND (48)	ND (42)	ND (53)	ND (50)	ND (27)	ND (50)	ND (38)	ND (50)	ND (50)	ND (99)	ND (99)
Aroclor-1248	ND (33)	ND (41)	ND (55)	ND (43) /UJ	ND (49) /UJ	ND (36) /UJ	ND (34)	ND (42)	ND (48)	ND (42)	ND (53)	ND (49)	ND (27)	300	450	ND (50)	ND (50)	ND (99)	580
Aroclor-1254	ND (33)	22 J/	15 J/	73 P/J	39 JP/J	ND (36) /UJ	ND (34)	ND (42)	ND (48)	ND (42)	ND (53)	ND (54)	ND (27)	ND (50)	ND (38)	64	74	ND (99)	280
Aroclor-1260	ND (33)	ND (59)	ND (79)	ND (62) /UJ	ND (71) /UJ	41 J/J	ND (49)	35 J	ND (76)	ND (62)	ND (78)	ND (74)	ND (39)	ND (50)	ND (38)	ND (50)	ND (50)	ND (99)	ND (99)
Total PCBs⁴	ND	22	15	73	39	41	ND	35	ND	ND	ND	ND	ND	300	450	64	74	ND	860

Notes:

1 ND () = Compound was not detected. The detection limit is included in parentheses
 2 December 4, 1998 sample was analyzed by Quanterra. Samples collected between 2000 and 2007 were analyzed by Compuchem.

The November 25, 2008 sample was analyzed by Microbac.

3 DUP = Duplicate sample

4 The total PCB value presented here are estimated totals based on estimated concentrations of individual Aroclors

Suffix Definitions:

/ = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

J = Result is detected below the reporting limit and is an estimated concentration

P = The Relative Percent Difference (RPD) between the two GC column values is greater than 25%. The higher value has been reported.

JP = The Relative Percent Difference (RPD) between the two GC column values is greater than 25%. The higher value has been reported. The concentration is also estimated.

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Table 3.1
Thermal Oxidizer 1 Results for Method TO-15 (VOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008					
		Therm-Ox 1			Destruction Efficiency		
		Influent	Influent Dup	Effluent	Low	High	Average
1,1,1-Trichloroethane	ppbv	NS		NS		NC	NC
1,1,2,2-Tetrachloroethane	ppbv	NS		NS		NC	NC
1,1,2-Trichloroethane	ppbv	NS		NS		NC	NC
1,1-Dichloroethane	ppbv	NS		NS		NC	NC
1,1-Dichloroethene	ppbv	NS		NS		NC	NC
1,2-Dichloroethane	ppbv	NS		NS		NC	NC
1,2-Dichloropropane	ppbv	NS		NS		NC	NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	NS		NS		NC	NC
2-Hexanone	ppbv	NS		NS		NC	NC
4-Methyl-2-pentanone	ppbv	NS		NS		NC	NC
Acetone	ppbv	NS		NS		NC	NC
Benzene	ppbv	NS		NS		NC	NC
Bromodichloromethane	ppbv	NS		NS		NC	NC
Bromoform	ppbv	NS		NS		NC	NC
Bromomethane	ppbv	NS		NS		NC	NC
Carbon Disulfide	ppbv	NS		NS		NC	NC
Carbon Tetrachloride	ppbv	NS		NS		NC	NC
Chlorobenzene	ppbv	NS		NS		NC	NC
Chloroethane	ppbv	NS		NS		NC	NC
Chloroform	ppbv	NS		NS		NC	NC
Chloromethane	ppbv	NS		NS		NC	NC
cis-1,2-Dichloroethene	ppbv	NS		NS		NC	NC
cis-1,3-Dichloropropene	ppbv	NS		NS		NC	NC
Dibromochloromethane	ppbv	NS		NS		NC	NC
Ethyl Benzene	ppbv	NS		NS		NC	NC
m,p-Xylene	ppbv	NS		NS		NC	NC
Methylene Chloride	ppbv	NS		NS		NC	NC
o-Xylene	ppbv	NS		NS		NC	NC
Styrene	ppbv	NS		NS		NC	NC
Tetrachloroethene	ppbv	NS		NS		NC	NC
Toluene	ppbv	NS		NS		NC	NC
trans-1,2-Dichloroethene	ppbv	NS		NS		NC	NC
trans-1,3-Dichloropropene	ppbv	NS		NS		NC	NC
Trichloroethene	ppbv	NS		NS		NC	NC
Vinyl Chloride	ppbv	NS		NS		NC	NC
Total	ppbv	0		0		0.0	NC
Total	lb/hr	NC		NC		NC	NC

Notes:

NC - Not calculated

NS - Not sampled

ppbv - Parts per billion volume

lb/hr - Pounds per hour

No samples were collected in October 2008 because the system was down for maintenance.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 1	October-08	NA	NA

Table 3.2
Thermal Oxidizer 1 Results for Method TO-15 (VOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08						Destruction Efficiency		
		Therm-Ox 1			Effluent			Low	High	Average
1,1,1-Trichloroethane	ppbv	16,000		600		120		80.00%	99.25%	89.63%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1,2-Trichloroethane	ppbv	39		0.73		0.74		NC	NC	NC
1,1-Dichloroethane	ppbv	3,400		28		23		17.86%	99.32%	58.59%
1,1-Dichloroethene	ppbv	180		1.6		84		NC	NC	NC
1,2-Dichloroethane	ppbv	240		3.0		3.4		NC	NC	NC
1,2-Dichloropropane	ppbv	190		2.1		ND	U	100.00%	100.00%	100.00%
2-Butanone (Methyl Ethyl Ketone)	ppbv	3,400		42		40		4.76%	98.82%	51.79%
2-Hexanone	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
4-Methyl-2-pentanone	ppbv	1,300		18		17		5.56%	98.69%	52.12%
Acetone	ppbv	2,900	/UBJ	50		53	/UBJ	NC	NC	NC
Benzene	ppbv	5,800		61		98		NC	NC	NC
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chlorobenzene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chloroethane	ppbv	390	/J	3.6		1.8		NC	NC	NC
Chloroform	ppbv	3,900		38		16		57.89%	99.59%	78.74%
Chloromethane	ppbv	23	J	0.71	J	4.3		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	19,000		580		77		86.72%	99.59%	93.16%
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	4,100		97		39		59.79%	99.05%	79.42%
m,p-Xylene	ppbv	14,000		860		160		81.40%	98.86%	90.13%
Methylene Chloride	ppbv	17,000		570		210		63.16%	98.76%	80.96%
o-Xylene	ppbv	6,500		400		63		84.25%	99.03%	91.64%
Styrene	ppbv	59		2.4		11		NC	NC	NC
Tetrachloroethene	ppbv	16,000		750		170		77.33%	98.94%	88.14%
Toluene	ppbv	20,000		1,100		370		98.15%	98.15%	98.15%
trans-1,2-Dichloroethene	ppbv	130		1.2		26		NC	NC	NC
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Trichloroethene	ppbv	12,000		440		130		70.45%	98.92%	84.69%
Vinyl Chloride	ppbv	2,700		24		34		NC	NC	NC
Total	ppbv	149,251		5,673		1,751.2		69.13%	98.83%	83.98%
Total	lb/hr	1.902		0.075		0.021		72.00%	98.90%	85.45%

Notes:

NC - Not calculated

NS - Not sampled

ppbv - Parts per billion volume

lb/hr - Pounds per hour

Qualifiers:

U - Below reported quantitation limit

J - Result is estimated

UBJ - Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

_/- Laboratory data qualifier

/_ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 1	11/21/08	92	743

Temperatures and flow rates reported correspond to instantaneous readings.

Table 3.3
Thermal Oxidizer 1 Results for Method TO-15 (VOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08						Destruction Efficiency		
		Therm-Ox 1			Effluent			Low	High	Average
Influent	Influent Dup									
1,1,1-Trichloroethane	ppbv	12,000		12,000		87		99.28%	99.28%	99.28%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1,2-Trichloroethane	ppbv	32		36		ND	U	100.00%	100.00%	100.00%
1,1-Dichloroethane	ppbv	3,400		3,300		19		99.42%	99.44%	99.43%
1,1-Dichloroethene	ppbv	170		180		29		82.94%	83.89%	83.42%
1,2-Dichloroethane	ppbv	200		220		ND	U	100.00%	100.00%	100.00%
1,2-Dichloropropane	ppbv	180		200		ND	U	100.00%	100.00%	100.00%
2-Butanone (Methyl Ethyl Ketone)	ppbv	970		1,100		8.8		99.09%	99.20%	99.15%
2-Hexanone	ppbv	ND	U	ND	U	1.1	J	NC	NC	NC
4-Methyl-2-pentanone	ppbv	960		1,000		5.7		99.41%	99.43%	99.42%
Acetone	ppbv	2,100		1,700		23		98.65%	98.90%	98.78%
Benzene	ppbv	5,100		4,800		47		99.02%	99.08%	99.05%
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chlorobenzene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chloroethane	ppbv	390		410	J	1.1	J	NC	NC	NC
Chloroform	ppbv	4,400		4,200		25		99.40%	99.43%	99.42%
Chloromethane	ppbv	ND	U	ND	U	2.1		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	12,000		12,000		67		99.44%	99.44%	99.44%
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	4,100		4,000		31		99.23%	99.24%	99.23%
m,p-Xylene	ppbv	12,000		13,000		130		98.92%	99.00%	98.96%
Methylene Chloride	ppbv	6,100	/UB	5,700	/UB	52	/B	NC	NC	NC
o-Xylene	ppbv	5,700		6,100		57		99.00%	99.07%	99.03%
Styrene	ppbv	60		70		3.4		94.33%	95.14%	94.74%
Tetrachloroethene	ppbv	11,000		12,000		87		99.21%	99.28%	99.24%
Toluene	ppbv	14,000		14,000		92		99.34%	99.34%	99.34%
trans-1,2-Dichloroethene	ppbv	130		140		8.8		93.23%	93.71%	93.47%
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Trichloroethene	ppbv	7,700		7,500		71		99.05%	99.08%	99.07%
Vinyl Chloride	ppbv	2,000		1,900		20		98.95%	99.00%	98.97%
Total	ppbv	104,692		105,556		868.0		99.17%	99.18%	99.17%
Total	lb/hr	1.159		1.177		0.010		99.14%	99.15%	99.14%

Notes:

NC - Not calculated
 ppbv - Parts per billion volume
 lb/hr - Pounds per hour

Qualifiers:

U - Below reported quantitation limit
 J - Result is estimated
 B - Compound or analyte was positively detected in sample and in associated blank
 UB - Compound or analyte is not detected at or above the indicated concentration due to blank contamination.
 / - Laboratory data qualifier
 /_ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 1	12/11/08	87	637

Temperatures and flow rates reported correspond to instantaneous readings.

Table 3.4
Thermal Oxidizer 2 Results for Method TO-15 (VOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008						
		Therm-Ox 2			Destruction Efficiency			
		Influent	Influent Dup	Effluent	Low	High	Average	
1,1,1-Trichloroethane	ppbv	NS		NS		NC	NC	NC
1,1,2,2-Tetrachloroethane	ppbv	NS		NS		NC	NC	NC
1,1,2-Trichloroethane	ppbv	NS		NS		NC	NC	NC
1,1-Dichloroethane	ppbv	NS		NS		NC	NC	NC
1,1-Dichloroethene	ppbv	NS		NS		NC	NC	NC
1,2-Dichloroethane	ppbv	NS		NS		NC	NC	NC
1,2-Dichloropropane	ppbv	NS		NS		NC	NC	NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	NS		NS		NC	NC	NC
2-Hexanone	ppbv	NS		NS		NC	NC	NC
4-Methyl-2-pentanone	ppbv	NS		NS		NC	NC	NC
Acetone	ppbv	NS		NS		NC	NC	NC
Benzene	ppbv	NS		NS		NC	NC	NC
Bromodichloromethane	ppbv	NS		NS		NC	NC	NC
Bromoform	ppbv	NS		NS		NC	NC	NC
Bromomethane	ppbv	NS		NS		NC	NC	NC
Carbon Disulfide	ppbv	NS		NS		NC	NC	NC
Carbon Tetrachloride	ppbv	NS		NS		NC	NC	NC
Chlorobenzene	ppbv	NS		NS		NC	NC	NC
Chloroethane	ppbv	NS		NS		NC	NC	NC
Chloroform	ppbv	NS		NS		NC	NC	NC
Chloromethane	ppbv	NS		NS		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	NS		NS		NC	NC	NC
cis-1,3-Dichloropropene	ppbv	NS		NS		NC	NC	NC
Dibromochloromethane	ppbv	NS		NS		NC	NC	NC
Ethyl Benzene	ppbv	NS		NS		NC	NC	NC
m,p-Xylene	ppbv	NS		NS		NC	NC	NC
Methylene Chloride	ppbv	NS		NS		NC	NC	NC
o-Xylene	ppbv	NS		NS		NC	NC	NC
Styrene	ppbv	NS		NS		NC	NC	NC
Tetrachloroethene	ppbv	NS		NS		NC	NC	NC
Toluene	ppbv	NS		NS		NC	NC	NC
trans-1,2-Dichloroethene	ppbv	NS		NS		NC	NC	NC
trans-1,3-Dichloropropene	ppbv	NS		NS		NC	NC	NC
Trichloroethene	ppbv	NS		NS		NC	NC	NC
Vinyl Chloride	ppbv	NS		NS		NC	NC	NC
Total	ppbv	0	0	0.0		NC	NC	NC
Total	lb/hr	NC	NC	NC		NC	NC	NC

Notes:

NC - Not calculated

NS - Not sampled

ppbv - parts per billion volume

lb/hr - pounds per hour

No samples were collected in October 2008 because the system was down for maintenance.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 2	October-08	NA	NA

Table 3.5
Thermal Oxidizer 2 Results for Method TO-15 (VOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08					
		Therm-Ox 2				Destruction Efficiency	
		Influent	Influent Dup	Effluent		Low	High
ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
1,1,1-Trichloroethane	ppbv	15,000		14,000		430	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	110		100		3.7	
1,1-Dichloroethane	ppbv	3,200		3,000		72	
1,1-Dichloroethene	ppbv	77		76		74	
1,2-Dichloroethane	ppbv	440		420		9.6	
1,2-Dichloropropane	ppbv	110		110		2.3	
2-Butanone (Methyl Ethyl Ketone)	ppbv	5,100		5,100		130	
2-Hexanone	ppbv	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	1,400		2,200		40	
Acetone	ppbv	6,000	/UBJ	6,700	/UBJ	290	/UBJ
Benzene	ppbv	6,600		6,500		300	
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U	0.49	J
Chlorobenzene	ppbv	ND	U	ND	U	ND	U
Chloroethane	ppbv	150		230		3.3	
Chloroform	ppbv	1,400		1,300		35	
Chloromethane	ppbv	25		25		5.8	
cis-1,2-Dichloroethene	ppbv	2,900		2,800		73	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U
Ethyl Benzene	ppbv	5,100		5,600		110	
m,p-Xylene	ppbv	21,000		20,000		420	
Methylene Chloride	ppbv	15,000		15,000		510	
o-Xylene	ppbv	7,900		7,500		160	
Styrene	ppbv	250		230		16	
Tetrachloroethene	ppbv	8,600		8,000		310	/J
Toluene	ppbv	58,000		45,000		680	
trans-1,2-Dichloroethene	ppbv	31		31		9.3	
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U
Trichloroethene	ppbv	8,100		8,100		270	
Vinyl Chloride	ppbv	520		510		28	
Total	ppbv	167,013		152,532		3,982.5	
Total	lb/hr	4.737		4.331		0.114	
						97.39%	97.62%
						97.37%	97.59%
						97.48%	

Notes:

NC - Not calculated

NS - Not sampled

ppbv - parts per billion volume

lb/hr - pounds per hour

Qualifiers:

U - below reported quantitation limit

J - Result is estimated

UBJ - Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

/ - Laboratory data qualifier

/ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 2	11/21/08	60	1,761

Temperatures and flow rates reported correspond to instantaneous readings.

Table 3.6
Thermal Oxidizer 2 Results for Method TO-15 (VOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08						
		Therm-Ox 2			Destruction Efficiency			
		Influent	Influent Dup	Effluent	Low	High	Average	
1,1,1-Trichloroethane	ppbv	NS		NS		NC	NC	NC
1,1,2,2-Tetrachloroethane	ppbv	NS		NS		NC	NC	NC
1,1,2-Trichloroethane	ppbv	NS		NS		NC	NC	NC
1,1-Dichloroethane	ppbv	NS		NS		NC	NC	NC
1,1-Dichloroethene	ppbv	NS		NS		NC	NC	NC
1,2-Dichloroethane	ppbv	NS		NS		NC	NC	NC
1,2-Dichloropropane	ppbv	NS		NS		NC	NC	NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	NS		NS		NC	NC	NC
2-Hexanone	ppbv	NS		NS		NC	NC	NC
4-Methyl-2-pentanone	ppbv	NS		NS		NC	NC	NC
Acetone	ppbv	NS		NS		NC	NC	NC
Benzene	ppbv	NS		NS		NC	NC	NC
Bromodichloromethane	ppbv	NS		NS		NC	NC	NC
Bromoform	ppbv	NS		NS		NC	NC	NC
Bromomethane	ppbv	NS		NS		NC	NC	NC
Carbon Disulfide	ppbv	NS		NS		NC	NC	NC
Carbon Tetrachloride	ppbv	NS		NS		NC	NC	NC
Chlorobenzene	ppbv	NS		NS		NC	NC	NC
Chloroethane	ppbv	NS		NS		NC	NC	NC
Chloroform	ppbv	NS		NS		NC	NC	NC
Chloromethane	ppbv	NS		NS		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	NS		NS		NC	NC	NC
cis-1,3-Dichloropropene	ppbv	NS		NS		NC	NC	NC
Dibromochloromethane	ppbv	NS		NS		NC	NC	NC
Ethyl Benzene	ppbv	NS		NS		NC	NC	NC
m,p-Xylene	ppbv	NS		NS		NC	NC	NC
Methylene Chloride	ppbv	NS		NS		NC	NC	NC
o-Xylene	ppbv	NS		NS		NC	NC	NC
Styrene	ppbv	NS		NS		NC	NC	NC
Tetrachloroethene	ppbv	NS		NS		NC	NC	NC
Toluene	ppbv	NS		NS		NC	NC	NC
trans-1,2-Dichloroethene	ppbv	NS		NS		NC	NC	NC
trans-1,3-Dichloropropene	ppbv	NS		NS		NC	NC	NC
Trichloroethene	ppbv	NS		NS		NC	NC	NC
Vinyl Chloride	ppbv	NS		NS		NC	NC	NC
Total	ppbv	0	0	0.0		NC	NC	NC
Total	lb/hr	NC	NC	NC		NC	NC	NC

Notes:

NC - Not calculated

NS - Not sampled

ppbv - parts per billion volume

lb/hr - pounds per hour

No samples were collected in December 2008 because Therm-Ox 2 was down for maintenance.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 2	12/11/08	NA	NA

Temperatures and flow rates reported correspond to instantaneous readings.

Table 3.7
SBPA and Off-Site ISVE System Results
for Method TO-15 (VOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008	
		SBPA ISVE	Off-Site ISVE
1,1,1-Trichloroethane	ppbv	NS	NS
1,1,2,2-Tetrachloroethane	ppbv	NS	NS
1,1,2-Trichloroethane	ppbv	NS	NS
1,1-Dichloroethane	ppbv	NS	NS
1,1-Dichloroethene	ppbv	NS	NS
1,2-Dichloroethane	ppbv	NS	NS
1,2-Dichloropropane	ppbv	NS	NS
2-Butanone (Methyl Ethyl Ketone)	ppbv	NS	NS
2-Hexanone	ppbv	NS	NS
4-Methyl-2-pentanone	ppbv	NS	NS
Acetone	ppbv	NS	NS
Benzene	ppbv	NS	NS
Bromodichloromethane	ppbv	NS	NS
Bromoform	ppbv	NS	NS
Bromomethane	ppbv	NS	NS
Carbon Disulfide	ppbv	NS	NS
Carbon Tetrachloride	ppbv	NS	NS
Chlorobenzene	ppbv	NS	NS
Chloroethane	ppbv	NS	NS
Chloroform	ppbv	NS	NS
Chloromethane	ppbv	NS	NS
cis-1,2-Dichloroethene	ppbv	NS	NS
cis-1,3-Dichloropropene	ppbv	NS	NS
Dibromochloromethane	ppbv	NS	NS
Ethyl Benzene	ppbv	NS	NS
m,p-Xylene	ppbv	NS	NS
Methylene Chloride	ppbv	NS	NS
o-Xylene	ppbv	NS	NS
Styrene	ppbv	NS	NS
Tetrachloroethene	ppbv	NS	NS
Toluene	ppbv	NS	NS
trans-1,2-Dichloroethene	ppbv	NS	NS
trans-1,3-Dichloropropene	ppbv	NS	NS
Trichloroethene	ppbv	NS	NS
Vinyl Chloride	ppbv	NS	NS
Total	ppbv	0	0
Total	lb/hr	NC	NC

Notes:

NC - Not calculated

NS - Not sampled

ppbv - parts per billion volume

lb/hr - pounds per hour

No samples were collected in October 2008 because the systems were down for maintenance.

System	Date	Temp (F)	Flow (scfm)
On-site	October-08	NA	NA
Off-site	October-08	NA	NA

Table 3.8
SBPA and Off-Site ISVE System Results
for Method TO-15 (VOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08			
		SBPA ISVE		Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	24,000		21,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	44		100	
1,1-Dichloroethane	ppbv	3,700		3,300	
1,1-Dichloroethene	ppbv	200		110	
1,2-Dichloroethane	ppbv	260		390	
1,2-Dichloropropane	ppbv	210		130	
2-Butanone (Methyl Ethyl Ketone)	ppbv	4,000		5,200	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	1,400		2,600	
Acetone	ppbv	3,600	/UBJ	4,200	/UBJ
Benzene	ppbv	8,700		9,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	400		210	
Chloroform	ppbv	4,200		1,900	
Chloromethane	ppbv	26		23	J
cis-1,2-Dichloroethene	ppbv	29,000		9,100	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	4,500		7,200	
m,p-Xylene	ppbv	23,000		30,000	
Methylene Chloride	ppbv	25,000		23,000	
o-Xylene	ppbv	10,000		12,000	
Styrene	ppbv	66		220	
Tetrachloroethene	ppbv	25,000		15,000	
Toluene	ppbv	32,000		32,000	
trans-1,2-Dichloroethene	ppbv	140		55	
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	18,000		13,000	
Vinyl Chloride	ppbv	3,000		920	
Total	ppbv	220,446		190,658	
Total	lb/hr	3.270		5.659	

Notes:

NC - Not calculated

NS - Not sampled

ppbv - parts per billion volume

lb/hr - pounds per hour

Qualifiers:

J - Result is estimated

U - Below reported quantitation limit

UBJ - Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

_ / - Laboratory data qualifier

_ / - Data validation qualifier

System	Date	Temp (F)	Flow (scfm)
On-site	11/21/08	94	859
Off-site	11/21/08	60*	1761*

Temperatures and flow rates reported correspond to instantaneous readings.

*Values were taken from Flow meter 504 for ThermOx 2

Table 3.9
SBPA and Off-Site ISVE System Results
for Method TO-15 (VOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08		
		SBPA ISVE	Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	12,000		NS
1,1,2,2-Tetrachloroethane	ppbv	ND	U	NS
1,1,2-Trichloroethane	ppbv	35		NS
1,1-Dichloroethane	ppbv	3,400		NS
1,1-Dichloroethene	ppbv	170		NS
1,2-Dichloroethane	ppbv	210		NS
1,2-Dichloropropane	ppbv	190		NS
2-Butanone (Methyl Ethyl Ketone)	ppbv	920		NS
2-Hexanone	ppbv	ND	U	NS
4-Methyl-2-pentanone	ppbv	970		NS
Acetone	ppbv	1,300		NS
Benzene	ppbv	4,900		NS
Bromodichloromethane	ppbv	ND	U	NS
Bromoform	ppbv	ND	U	NS
Bromomethane	ppbv	ND	U	NS
Carbon Disulfide	ppbv	ND	U	NS
Carbon Tetrachloride	ppbv	ND	U	NS
Chlorobenzene	ppbv	ND	U	NS
Chloroethane	ppbv	380		NS
Chloroform	ppbv	4,300		NS
Chloromethane	ppbv	ND	U	NS
cis-1,2-Dichloroethene	ppbv	13,000		NS
cis-1,3-Dichloropropene	ppbv	ND	U	NS
Dibromochloromethane	ppbv	ND	U	NS
Ethyl Benzene	ppbv	4,100		NS
m,p-Xylene	ppbv	12,000		NS
Methylene Chloride	ppbv	6,100	/UB	NS
o-Xylene	ppbv	6,000		NS
Styrene	ppbv	68		NS
Tetrachloroethene	ppbv	12,000		NS
Toluene	ppbv	14,000		NS
trans-1,2-Dichloroethene	ppbv	130		NS
trans-1,3-Dichloropropene	ppbv	ND	U	NS
Trichloroethene	ppbv	7,800		NS
Vinyl Chloride	ppbv	2,000		NS
Total	ppbv	105,973		0
Total	lb/hr	1.550		NC

Notes:

NC - Not calculated

NS - Not sampled

ppbv - parts per billion volume

lb/hr - pounds per hour

Qualifiers:

U - Below reported quantitation limit

UB - Compound or analyte is not detected at or above the indicated concentration due to blank contamination.

/ - Laboratory data qualifier

/ - Data validation qualifier

No samples were collected from the Off-Site ISVE system in December 2008 because Therm-Ox 2 was down for maintenance.

System	Date	Temp (F)	Flow (scfm)
On-site	12/11/08	88	835
Off-site	12/11/08	NA	NA

Temperatures and flow rates reported correspond to instantaneous readings.

Table 3.10
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008						
		Therm-Ox 1			Destruction Efficiency			
		Influent	Influent Dup	Effluent	Low	High	Average	
1,2,4-Trichlorobenzene	µg	NS	NS	NS	NC	NC	NC	
1,2-Dichlorobenzene	µg	NS	NS	NS	NC	NC	NC	
1,3-Dichlorobenzene	µg	NS	NS	NS	NC	NC	NC	
1,4-Dichlorobenzene	µg	NS	NS	NS	NC	NC	NC	
2,4,5-Trichlorophenol	µg	NS	NS	NS	NC	NC	NC	
2,4,6-Trichlorophenol	µg	NS	NS	NS	NC	NC	NC	
2,4-Dichlorophenol	µg	NS	NS	NS	NC	NC	NC	
2,4-Dimethylphenol	µg	NS	NS	NS	NC	NC	NC	
2,4-Dinitrophenol	µg	NS	NS	NS	NC	NC	NC	
2,4-Dinitrotoluene	µg	NS	NS	NS	NC	NC	NC	
2,6-Dinitrotoluene	µg	NS	NS	NS	NC	NC	NC	
2-Chloronaphthalene	µg	NS	NS	NS	NC	NC	NC	
2-Chlorophenol	µg	NS	NS	NS	NC	NC	NC	
2-Methylnaphthalene	µg	NS	NS	NS	NC	NC	NC	
2-Methylphenol	µg	NS	NS	NS	NC	NC	NC	
2-Nitroaniline	µg	NS	NS	NS	NC	NC	NC	
2-Nitrophenol	µg	NS	NS	NS	NC	NC	NC	
3,3'-Dichlorobenzidine	µg	NS	NS	NS	NC	NC	NC	
3/4-Methylphenol	µg	NS	NS	NS	NC	NC	NC	
3-Nitroaniline	µg	NS	NS	NS	NC	NC	NC	
4,6-Dinitro-2-methylphenol	µg	NS	NS	NS	NC	NC	NC	
4-Bromophenyl phenyl ether	µg	NS	NS	NS	NC	NC	NC	
4-Chloro-3-methylphenol	µg	NS	NS	NS	NC	NC	NC	
4-Chloroaniline	µg	NS	NS	NS	NC	NC	NC	
4-Chlorophenyl phenyl ether	µg	NS	NS	NS	NC	NC	NC	
4-Nitroaniline	µg	NS	NS	NS	NC	NC	NC	
4-Nitrophenol	µg	NS	NS	NS	NC	NC	NC	
Acenaphthene	µg	NS	NS	NS	NC	NC	NC	
Acenaphthylene	µg	NS	NS	NS	NC	NC	NC	
Anthracene	µg	NS	NS	NS	NC	NC	NC	
Benzo[a]anthracene	µg	NS	NS	NS	NC	NC	NC	
Benzo[a]pyrene	µg	NS	NS	NS	NC	NC	NC	
Benzo[b]fluoranthene	µg	NS	NS	NS	NC	NC	NC	
Benzo[g,h,i]perylene	µg	NS	NS	NS	NC	NC	NC	
Benzo[k]fluoranthene	µg	NS	NS	NS	NC	NC	NC	
Bis(2-chloroethoxy)methane	µg	NS	NS	NS	NC	NC	NC	
Bis(2-chloroethyl)ether	µg	NS	NS	NS	NC	NC	NC	
Bis(2-chloroisopropyl)ether	µg	NS	NS	NS	NC	NC	NC	
Bis(2-ethylhexyl)phthalate	µg	NS	NS	NS	NC	NC	NC	
Butyl benzyl phthalate	µg	NS	NS	NS	NC	NC	NC	
Carbazole	µg	NS	NS	NS	NC	NC	NC	
Chrysene	µg	NS	NS	NS	NC	NC	NC	
Dibenz[a,h]anthracene	µg	NS	NS	NS	NC	NC	NC	
Dibenzofuran	µg	NS	NS	NS	NC	NC	NC	
Diethyl phthalate	µg	NS	NS	NS	NC	NC	NC	
Dimethyl phthalate	µg	NS	NS	NS	NC	NC	NC	
Di-n-butyl phthalate	µg	NS	NS	NS	NC	NC	NC	
Di-n-octyl phthalate	µg	NS	NS	NS	NC	NC	NC	
Fluoranthene	µg	NS	NS	NS	NC	NC	NC	
Fluorene	µg	NS	NS	NS	NC	NC	NC	
Hexachlorobenzene	µg	NS	NS	NS	NC	NC	NC	
Hexachlorobutadiene	µg	NS	NS	NS	NC	NC	NC	
Hexachlorocyclopentadiene	µg	NS	NS	NS	NC	NC	NC	
Hexachloroethane	µg	NS	NS	NS	NC	NC	NC	

Table 3.10
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008						
		Therm-Ox 1			Destruction Efficiency			
		Influent	Influent Dup	Effluent	Low	High	Average	
Indeno[1,2,3cd]pyrene	µg	NS	NS	NS	NC	NC	NC	
Isophorone	µg	NS	NS	NS	NC	NC	NC	
Naphthalene	µg	NS	NS	NS	NC	NC	NC	
Nitrobenzene	µg	NS	NS	NS	NC	NC	NC	
N-Nitrosodi-n-propylamine	µg	NS	NS	NS	NC	NC	NC	
N-Nitrosodiphenylamine	µg	NS	NS	NS	NC	NC	NC	
Pentachlorophenol	µg	NS	NS	NS	NC	NC	NC	
Phenanthrene	µg	NS	NS	NS	NC	NC	NC	
Phenol	µg	NS	NS	NS	NC	NC	NC	
Pyrene	µg	NS	NS	NS	NC	NC	NC	
Total	µg	0.00	0.00	0.00	NC	NC	NC	

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

No samples were collected in October 2008 because the system was down for maintenance.

Table 3.11
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08							Destruction Efficiency		
		Therm-Ox 1				Effluent			Low	High	Average
		Influent		Influent Dup							
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
1,2-Dichlorobenzene	µg	4.3	J	ND	U	ND	U	ND	NC	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
1,4-Dichlorobenzene	µg	1.3	J	ND	U	ND	U	ND	NC	NC	NC
2,4,5-Trichlorophenol	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
2-Methylnaphthalene	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
2-Methylphenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U/UJ	ND	U	ND	NC	NC	NC
3/4-Methylphenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Anthracene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Benz[a]anthracene	µg	ND	U	ND	U/UJ	ND	U	ND	NC	NC	NC
Benz[a]pyrene	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Benz[b]fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Benz[g,h,i]perylene	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Benz[k]fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	1.4	J/J	2.4	J	NC	NC	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U/UJ	ND	U	ND	NC	NC	NC
Carbazole	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Chrysene	µg	ND	U	ND	U/UJ	ND	U	ND	NC	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Diethyl phthalate	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Fluorene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Hexachlorobutadiene	µg	0.94	J	ND	U	ND	U	ND	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U/UJ	ND	U/UJ	ND	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	ND	NC	NC	NC

Table 3.11
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08								
		Therm-Ox 1				Destruction Efficiency				
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	ND	U	ND	U	ND	U	NC	NC	NC
Naphthalene	µg	0.94	J	ND	U	ND	U	NC	NC	NC
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U/UJ	ND	U/UJ	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U/UJ	ND	U/UJ	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U/UJ	ND	U/UJ	NC	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Total	µg	7.48		1.40		2.40		NC	NC	NC

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

Qualifiers:

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

/ - Laboratory data qualifier

/_ - Data validation qualifier

/__ - Data validation qualifier

Table 3.12
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08						Destruction Efficiency		
		Therm-Ox 1				Effluent		Low	High	Average
		Influent	Influent Dup	Effluent	Effluent	Low	High			
1,2,4-Trichlorobenzene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
1,2-Dichlorobenzene	µg	ND	U/UJ	0.94	J/J	ND	U/UJ	NC	NC	NC
1,3-Dichlorobenzene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
1,4-Dichlorobenzene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4,5-Trichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2-Chloronaphthalene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2-Chlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2-Methylnaphthalene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2-Methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2-Nitroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2-Nitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
3/4-Methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
3-Nitroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Chloroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Nitroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Nitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Acenaphthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Acenaphthylene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Anthracene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Benzo[a]anthracene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Benzo[a]pyrene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Benzo[b]fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Benzo[g,h,i]perylene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Benzo[k]fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	11	b/UBJ	2.5	Jb/UBJ	2.1	Jb/UBJ	NC	NC	NC
Butyl benzyl phthalate	µg	1.8	J/UBJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Carbazole	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Chrysene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Dibenz[a,h]anthracene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Dibenzofuran	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Diethyl phthalate	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Dimethyl phthalate	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Di-n-butyl phthalate	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Di-n-octyl phthalate	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Fluorene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Hexachlorobenzene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Hexachlorobutadiene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Hexachloroethane	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC

Table 3.12
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08								
		Therm-Ox 1						Destruction Efficiency		
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Isophorone	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Naphthalene	µg	ND	U/UJ	0.23	J/J	ND	U/UJ	NC	NC	NC
Nitrobenzene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Pentachlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Phanthrene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Phenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Pyrene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Total	µg	12.80		3.67		2.10		42.79%	83.59%	63.19%

Notes:

µg - Microgram

NC - Not calculated

Qualifiers:

J - Result is estimated

U - below reported quantitation limit

Jb - Detected in the associated Method Blank at a concentration between the Reporting Limit and Method Detection Limit

b - Detected in the associated Method Blank at a concentration above the Method Detection Limit but less than the routine Reporting Limit.

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

UBJ - Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

/_ - Laboratory data qualifier

/_ - Data validation qualifier

/_ - Data validation qualifier

Table 3.13
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008					
		Therm-Ox 2			Destruction Efficiency		
		Influent	Influent Dup	Effluent	Low	High	Average
1,2,4-Trichlorobenzene	µg	NS		NS		NC	NC
1,2-Dichlorobenzene	µg	NS		NS		NC	NC
1,3-Dichlorobenzene	µg	NS		NS		NC	NC
1,4-Dichlorobenzene	µg	NS		NS		NC	NC
2,4,5-Trichlorophenol	µg	NS		NS		NC	NC
2,4,6-Trichlorophenol	µg	NS		NS		NC	NC
2,4-Dichlorophenol	µg	NS		NS		NC	NC
2,4-Dimethylphenol	µg	NS		NS		NC	NC
2,4-Dinitrophenol	µg	NS		NS		NC	NC
2,4-Dinitrotoluene	µg	NS		NS		NC	NC
2,6-Dinitrotoluene	µg	NS		NS		NC	NC
2-Chloronaphthalene	µg	NS		NS		NC	NC
2-Chlorophenol	µg	NS		NS		NC	NC
2-Methylnaphthalene	µg	NS		NS		NC	NC
2-Methylphenol	µg	NS		NS		NC	NC
2-Nitroaniline	µg	NS		NS		NC	NC
2-Nitrophenol	µg	NS		NS		NC	NC
3,3'-Dichlorobenzidine	µg	NS		NS		NC	NC
3/4-Methylphenol	µg	NS		NS		NC	NC
3-Nitroaniline	µg	NS		NS		NC	NC
4,6-Dinitro-2-methylphenol	µg	NS		NS		NC	NC
4-Bromophenyl phenyl ether	µg	NS		NS		NC	NC
4-Chloro-3-methylphenol	µg	NS		NS		NC	NC
4-Chloroaniline	µg	NS		NS		NC	NC
4-Chlorophenyl phenyl ether	µg	NS		NS		NC	NC
4-Nitroaniline	µg	NS		NS		NC	NC
4-Nitrophenol	µg	NS		NS		NC	NC
Acenaphthene	µg	NS		NS		NC	NC
Acenaphthylene	µg	NS		NS		NC	NC
Anthracene	µg	NS		NS		NC	NC
Benzo[a]anthracene	µg	NS		NS		NC	NC
Benzo[a]pyrene	µg	NS		NS		NC	NC
Benzo[b]fluoranthene	µg	NS		NS		NC	NC
Benzo[g,h,i]perylene	µg	NS		NS		NC	NC
Benzo[k]fluoranthene	µg	NS		NS		NC	NC
Bis(2-chloroethoxy)methane	µg	NS		NS		NC	NC
Bis(2-chloroethyl)ether	µg	NS		NS		NC	NC
Bis(2-chloroisopropyl)ether	µg	NS		NS		NC	NC
Bis(2-ethylhexyl)phthalate	µg	NS		NS		NC	NC
Butyl benzyl phthalate	µg	NS		NS		NC	NC
Carbazole	µg	NS		NS		NC	NC
Chrysene	µg	NS		NS		NC	NC
Dibenz[a,h]anthracene	µg	NS		NS		NC	NC
Dibenzofuran	µg	NS		NS		NC	NC
Diethyl phthalate	µg	NS		NS		NC	NC
Dimethyl phthalate	µg	NS		NS		NC	NC
Di-n-butyl phthalate	µg	NS		NS		NC	NC
Di-n-octyl phthalate	µg	NS		NS		NC	NC
Fluoranthene	µg	NS		NS		NC	NC
Fluorene	µg	NS		NS		NC	NC
Hexachlorobenzene	µg	NS		NS		NC	NC
Hexachlorobutadiene	µg	NS		NS		NC	NC
Hexachlorocyclopentadiene	µg	NS		NS		NC	NC
Hexachloroethane	µg	NS		NS		NC	NC

Table 3.13
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008					
		Therm-Ox 2			Destruction Efficiency		
		Influent	Influent Dup	Effluent	Low	High	Average
Indeno[1,2,3cd]pyrene	µg	NS	NS	NS	NC	NC	NC
Isophorone	µg	NS	NS	NS	NC	NC	NC
Naphthalene	µg	NS	NS	NS	NC	NC	NC
Nitrobenzene	µg	NS	NS	NS	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	NS	NS	NS	NC	NC	NC
N-Nitrosodiphenylamine	µg	NS	NS	NS	NC	NC	NC
Pentachlorophenol	µg	NS	NS	NS	NC	NC	NC
Phenanthrene	µg	NS	NS	NS	NC	NC	NC
Phenol	µg	NS	NS	NS	NC	NC	NC
Pyrene	µg	NS	NS	NS	NC	NC	NC
Total	µg	0.00	0.00	0.00	NC	NC	NC

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

No samples were collected in October 2008 because the system was down for maintenance.

Table 3.14
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08								
		Therm-Ox 2				Destruction Efficiency				
		Influent		Influent Dup		Effluent		Low	High	Average
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,2-Dichlorobenzene	µg	6.2	J	7.3	J	ND	U	NC	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,4-Dichlorobenzene	µg	1.2	J	1.2	J	ND	U	NC	NC	NC
2,4,5-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dimethylphenol	µg	0.99	J	ND	U	ND	U	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylnaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC	NC
3/4-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[b]fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[k]fluoranthene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	2.0	J	8.1	J	2.9	J	NC	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U	1.1	J	NC	NC	NC
Carbazole	µg	ND	U	ND	U	ND	U	NC	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC	NC
Diethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobutadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC	NC

Table 3.14
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08							
		Therm-Ox 2				Destruction Efficiency			
Influent	Influent Dup	Effluent	Low	High	Average				
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC
Isophorone	µg	3.3	J	3.4	J	ND	U	NC	NC
Naphthalene	µg	4.2		4.9		ND	U	100.00%	100.00%
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC
Pentachlorophenol	µg	ND	U	ND	U	ND	U	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC
Total	µg	17.89		24.90		4.00		77.64%	83.94%
									80.79%

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

Qualifiers:

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

/ - Laboratory data qualifier

/_ - Data validation qualifier

/_ - Data validation qualifier

Table 3.15
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08					
		Therm-Ox 2			Destruction Efficiency		
Influent	Influent Dup	Effluent	Low	High	Average		
1,2,4-Trichlorobenzene	µg	NS	NS	NS	NC	NC	NC
1,2-Dichlorobenzene	µg	NS	NS	NS	NC	NC	NC
1,3-Dichlorobenzene	µg	NS	NS	NS	NC	NC	NC
1,4-Dichlorobenzene	µg	NS	NS	NS	NC	NC	NC
2,4,5-Trichlorophenol	µg	NS	NS	NS	NC	NC	NC
2,4,6-Trichlorophenol	µg	NS	NS	NS	NC	NC	NC
2,4-Dichlorophenol	µg	NS	NS	NS	NC	NC	NC
2,4-Dimethylphenol	µg	NS	NS	NS	NC	NC	NC
2,4-Dinitrophenol	µg	NS	NS	NS	NC	NC	NC
2,4-Dinitrotoluene	µg	NS	NS	NS	NC	NC	NC
2,6-Dinitrotoluene	µg	NS	NS	NS	NC	NC	NC
2-Chloronaphthalene	µg	NS	NS	NS	NC	NC	NC
2-Chlorophenol	µg	NS	NS	NS	NC	NC	NC
2-Methylnaphthalene	µg	NS	NS	NS	NC	NC	NC
2-Methylphenol	µg	NS	NS	NS	NC	NC	NC
2-Nitroaniline	µg	NS	NS	NS	NC	NC	NC
2-Nitrophenol	µg	NS	NS	NS	NC	NC	NC
3,3'-Dichlorobenzidine	µg	NS	NS	NS	NC	NC	NC
3/4-Methylphenol	µg	NS	NS	NS	NC	NC	NC
3-Nitroaniline	µg	NS	NS	NS	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	NS	NS	NS	NC	NC	NC
4-Bromophenyl phenyl ether	µg	NS	NS	NS	NC	NC	NC
4-Chloro-3-methylphenol	µg	NS	NS	NS	NC	NC	NC
4-Chloroaniline	µg	NS	NS	NS	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	NS	NS	NS	NC	NC	NC
4-Nitroaniline	µg	NS	NS	NS	NC	NC	NC
4-Nitrophenol	µg	NS	NS	NS	NC	NC	NC
Acenaphthene	µg	NS	NS	NS	NC	NC	NC
Acenaphthylene	µg	NS	NS	NS	NC	NC	NC
Anthracene	µg	NS	NS	NS	NC	NC	NC
Benzo[a]anthracene	µg	NS	NS	NS	NC	NC	NC
Benzo[a]pyrene	µg	NS	NS	NS	NC	NC	NC
Benzo[b]fluoranthene	µg	NS	NS	NS	NC	NC	NC
Benzo[g,h,i]perylene	µg	NS	NS	NS	NC	NC	NC
Benzo[k]fluoranthene	µg	NS	NS	NS	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	NS	NS	NS	NC	NC	NC
Bis(2-chloroethyl)ether	µg	NS	NS	NS	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	NS	NS	NS	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	NS	NS	NS	NC	NC	NC
Butyl benzyl phthalate	µg	NS	NS	NS	NC	NC	NC
Carbazole	µg	NS	NS	NS	NC	NC	NC
Chrysene	µg	NS	NS	NS	NC	NC	NC
Dibenz[a,h]anthracene	µg	NS	NS	NS	NC	NC	NC
Dibenzofuran	µg	NS	NS	NS	NC	NC	NC
Diethyl phthalate	µg	NS	NS	NS	NC	NC	NC
Dimethyl phthalate	µg	NS	NS	NS	NC	NC	NC
Di-n-butyl phthalate	µg	NS	NS	NS	NC	NC	NC
Di-n-octyl phthalate	µg	NS	NS	NS	NC	NC	NC
Fluoranthene	µg	NS	NS	NS	NC	NC	NC
Fluorene	µg	NS	NS	NS	NC	NC	NC
Hexachlorobenzene	µg	NS	NS	NS	NC	NC	NC
Hexachlorobutadiene	µg	NS	NS	NS	NC	NC	NC
Hexachlorocyclopentadiene	µg	NS	NS	NS	NC	NC	NC
Hexachloroethane	µg	NS	NS	NS	NC	NC	NC

Table 3.15
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08					
		Therm-Ox 2			Destruction Efficiency		
Influent	Influent Dup	Effluent	Low	High	Average		
Indeno[1,2,3cd]pyrene	µg	NS	NS	NS	NC	NC	NC
Isophorone	µg	NS	NS	NS	NC	NC	NC
Naphthalene	µg	NS	NS	NS	NC	NC	NC
Nitrobenzene	µg	NS	NS	NS	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	NS	NS	NS	NC	NC	NC
N-Nitrosodiphenylamine	µg	NS	NS	NS	NC	NC	NC
Pentachlorophenol	µg	NS	NS	NS	NC	NC	NC
Phenanthrene	µg	NS	NS	NS	NC	NC	NC
Phenol	µg	NS	NS	NS	NC	NC	NC
Pyrene	µg	NS	NS	NS	NC	NC	NC
Total	µg	0.00	0.00	0.00	NC	NC	NC

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

No samples were collected in December 2008 because Therm-Ox 2 was down for maintenance.

Table 3.16
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008	
		SBPA ISVE	Off-Site ISVE
1,2,4-Trichlorobenzene	µg	NS	NS
1,2-Dichlorobenzene	µg	NS	NS
1,3-Dichlorobenzene	µg	NS	NS
1,4-Dichlorobenzene	µg	NS	NS
2,4,5-Trichlorophenol	µg	NS	NS
2,4,6-Trichlorophenol	µg	NS	NS
2,4-Dichlorophenol	µg	NS	NS
2,4-Dimethylphenol	µg	NS	NS
2,4-Dinitrophenol	µg	NS	NS
2,4-Dinitrotoluene	µg	NS	NS
2,6-Dinitrotoluene	µg	NS	NS
2-Chloronaphthalene	µg	NS	NS
2-Chlorophenol	µg	NS	NS
2-Methylnaphthalene	µg	NS	NS
2-Methylphenol	µg	NS	NS
2-Nitroaniline	µg	NS	NS
2-Nitrophenol	µg	NS	NS
3,3-Dichlorobenzidine	µg	NS	NS
3/4-Methylphenol	µg	NS	NS
3-Nitroaniline	µg	NS	NS
4,6-Dinitro-2-methylphenol	µg	NS	NS
4-Bromophenyl phenyl ether	µg	NS	NS
4-Chloro-3-methylphenol	µg	NS	NS
4-Chloroaniline	µg	NS	NS
4-Chlorophenyl phenyl ether	µg	NS	NS
4-Nitroaniline	µg	NS	NS
4-Nitrophenol	µg	NS	NS
Acenaphthene	µg	NS	NS
Acenaphthylene	µg	NS	NS
Anthracene	µg	NS	NS
Benzo[a]anthracene	µg	NS	NS
Benzo[a]pyrene	µg	NS	NS
Benzo[b]fluoranthene	µg	NS	NS
Benzo[g,h,i]perylene	µg	NS	NS
Benzo[k]fluoranthene	µg	NS	NS
Bis(2-chloroethoxy)methane	µg	NS	NS
Bis(2-chloroethyl)ether	µg	NS	NS
Bis(2-chloroisopropyl)ether	µg	NS	NS
Bis(2-ethylhexyl)phthalate	µg	NS	NS
Butyl benzyl phthalate	µg	NS	NS
Carbazole	µg	NS	NS
Chrysene	µg	NS	NS
Dibenz[a,h]anthracene	µg	NS	NS
Dibenzofuran	µg	NS	NS
Diethyl phthalate	µg	NS	NS
Dimethyl phthalate	µg	NS	NS
Di-n-butyl phthalate	µg	NS	NS
Di-n-octyl phthalate	µg	NS	NS
Fluoranthene	µg	NS	NS
Fluorene	µg	NS	NS
Hexachlorobenzene	µg	NS	NS
Hexachlorobutadiene	µg	NS	NS
Hexachlorocyclopentadiene	µg	NS	NS
Hexachloroethane	µg	NS	NS

Table 3.16
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - October 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	October 2008			
		SBPA ISVE		Off-Site ISVE	
Indeno[1,2,3cd]pyrene	µg	NS		NS	
Isophorone	µg	NS		NS	
Naphthalene	µg	NS		NS	
Nitrobenzene	µg	NS		NS	
N-Nitrosodi-n-propylamine	µg	NS		NS	
N-Nitrosodiphenylamine	µg	NS		NS	
Pentachlorophenol	µg	NS		NS	
Phenanthrene	µg	NS		NS	
Phenol	µg	NS		NS	
Pyrene	µg	NS		NS	
Total	µg	0.00		0.00	

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

No samples were collected in October 2008 because the systems were down for maintenance.

Table 3.17
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08			
		SBPA ISVE		Off-Site ISVE	
1,2,4-Trichlorobenzene	µg	ND	U	ND	U
1,2-Dichlorobenzene	µg	12		8.1	J
1,3-Dichlorobenzene	µg	1.3	J	ND	U
1,4-Dichlorobenzene	µg	3.3	J	1.3	J
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	1.9	J	1.7	J
2-Methylphenol	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3/4-Methylphenol	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl phenyl ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo[a]anthracene	µg	ND	U	ND	U
Benzo[a]pyrene	µg	ND	U	ND	U
Benzo[b]fluoranthene	µg	ND	U/UJ	ND	U/UJ
Benzo[g,h,i]perylene	µg	ND	U	ND	U
Benzo[k]fluoranthene	µg	ND	U/UJ	ND	U/UJ
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U
Bis(2-chloroethyl)ether	µg	ND	U	ND	U
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U
Bis(2-ethylhexyl)phthalate	µg	1.7	J	1.9	J
Butyl benzyl phthalate	µg	ND	U	ND	U
Carbazole	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz[a,h]anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethyl phthalate	µg	ND	U	ND	U
Dimethyl phthalate	µg	ND	U	ND	U
Di-n-butyl phthalate	µg	ND	U	ND	U
Di-n-octyl phthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	4.0	J	1.4	J
Hexachlorocyclopentadiene	µg	ND	U	ND	U
Hexachloroethane	µg	ND	U	ND	U

Table 3.17
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - November 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	11/21/08			
		SBPA ISVE		Off-Site ISVE	
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U
Isophorone	µg	4.0	J	9.6	J
Naphthalene	µg	5.3		13	
Nitrobenzene	µg	ND	U	ND	U
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
Total	µg	33.50		37.00	

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

Qualifiers:

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

/ - Laboratory data qualifier

/ - Data validation qualifier

Table 3.18
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08		
		SBPA ISVE		Off-Site ISVE
1,2,4-Trichlorobenzene	µg	ND	U/UJ	NS
1,2-Dichlorobenzene	µg	4.9	J/J	NS
1,3-Dichlorobenzene	µg	ND	U/UJ	NS
1,4-Dichlorobenzene	µg	1.4	J/J	NS
2,4,5-Trichlorophenol	µg	ND	U/UJ	NS
2,4,6-Trichlorophenol	µg	ND	U/UJ	NS
2,4-Dichlorophenol	µg	ND	U/UJ	NS
2,4-Dimethylphenol	µg	ND	U/UJ	NS
2,4-Dinitrophenol	µg	ND	U/UJ	NS
2,4-Dinitrotoluene	µg	ND	U/UJ	NS
2,6-Dinitrotoluene	µg	ND	U/UJ	NS
2-Chloronaphthalene	µg	ND	U/UJ	NS
2-Chlorophenol	µg	ND	U/UJ	NS
2-Methylnaphthalene	µg	ND	U/UJ	NS
2-Methylphenol	µg	ND	U/UJ	NS
2-Nitroaniline	µg	ND	U/UJ	NS
2-Nitrophenol	µg	ND	U/UJ	NS
3,3'-Dichlorobenzidine	µg	ND	U/UJ	NS
3/4-Methylphenol	µg	ND	U/UJ	NS
3-Nitroaniline	µg	ND	U/UJ	NS
4,6-Dinitro-2-methylphenol	µg	ND	U/UJ	NS
4-Bromophenyl phenyl ether	µg	ND	U/UJ	NS
4-Chloro-3-methylphenol	µg	ND	U/UJ	NS
4-Chloroaniline	µg	ND	U/UJ	NS
4-Chlorophenyl phenyl ether	µg	ND	U/UJ	NS
4-Nitroaniline	µg	ND	U/UJ	NS
4-Nitrophenol	µg	ND	U/UJ	NS
Acenaphthene	µg	ND	U/UJ	NS
Acenaphthylene	µg	ND	U/UJ	NS
Anthracene	µg	ND	U/UJ	NS
Benz[a]anthracene	µg	ND	U/UJ	NS
Benz[a]pyrene	µg	ND	U/UJ	NS
Benz[b]fluoranthene	µg	ND	U/UJ	NS
Benz[g,h,i]perylene	µg	ND	U/UJ	NS
Benz[k]fluoranthene	µg	ND	U/UJ	NS
Bis(2-chloroethoxy)methane	µg	ND	U/UJ	NS
Bis(2-chloroethyl)ether	µg	ND	U/UJ	NS
Bis(2-chloroisopropyl)ether	µg	ND	U/UJ	NS
Bis(2-ethylhexyl)phthalate	µg	ND	U/UJ	NS
Butyl benzyl phthalate	µg	ND	U/UJ	NS
Carbazole	µg	ND	U/UJ	NS
Chrysene	µg	ND	U/UJ	NS
Dibenz[a,h]anthracene	µg	ND	U/UJ	NS
Dibenzofuran	µg	ND	U/UJ	NS
Diethyl phthalate	µg	ND	U/UJ	NS
Dimethyl phthalate	µg	ND	U/UJ	NS
Di-n-butyl phthalate	µg	ND	U/UJ	NS
Di-n-octyl phthalate	µg	ND	U/UJ	NS
Fluoranthene	µg	ND	U/UJ	NS
Fluorene	µg	ND	U/UJ	NS
Hexachlorobenzene	µg	ND	U/UJ	NS
Hexachlorobutadiene	µg	2.2	J/J	NS
Hexachlorocyclopentadiene	µg	ND	U/UJ	NS
Hexachloroethane	µg	ND	U/UJ	NS

Table 3.18
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - December 2008
American Chemical Service
Griffith, Indiana

Compounds	Units	12/11/08		
		SBPA ISVE		Off-Site ISVE
Indeno[1,2,3cd]pyrene	µg	0.57	Jb/JB	NS
Isophorone	µg	1.2	J/J	NS
Naphthalene	µg	3	/J	NS
Nitrobenzene	µg	ND	U/UJ	NS
N-Nitrosodi-n-propylamine	µg	ND	U/UJ	NS
N-Nitrosodiphenylamine	µg	ND	U/UJ	NS
Pentachlorophenol	µg	ND	U/UJ	NS
Phenanthrene	µg	ND	U/UJ	NS
Phenol	µg	ND	U/UJ	NS
Pyrene	µg	ND	U/UJ	NS
Total	µg	13.27		0.00

Notes:

µg - Microgram

NC - Not calculated

NS - Not sampled

No samples were collected from the Off-Site ISVE system in December 2008 because Therm-Ox 2 was down for maintenance.

Qualifiers:

J - Result is estimated

U - below reported quantitation limit

Jb/JB - Detected in the associated Method Blank at a concentration between the Reporting Limit and Method Detection Limit

UJ - Indicates the compound or analyte was analyzed for but not detected.
The sample detection limit is an estimated value.

/ - Laboratory data qualifier

/_ - Data validation qualifier

Table 3.19
Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-01	10/16/2008	NM	NM	NM	System Down
	11/20/2008	27	51.5	1	
	12/31/2008	12	13.5	8	
SVE-02	10/16/2008	NM	NM	NM	System Down
	11/20/2008	5	53.0	2	
	12/31/2008	6	3.3	8	
SVE-03	10/16/2008	NM	NM	NM	System Down
	11/20/2008	7	51.5	1	
	12/31/2008	7	13.5	4	
SVE-04	10/16/2008	NM	NM	NM	System Down
	11/20/2008	10	53.0	2	
	12/31/2008	3	3.3	3	
SVE-05	10/16/2008	NM	NM	NM	System Down
	11/20/2008	4	53.0	0.6	
	12/31/2008	3	3.3	9	
SVE-06	10/16/2008	NM	NM	NM	System Down
	11/20/2008	9	52.0	0.5	
	12/31/2008	7	13.0	7	
SVE-07	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	51.5	1	
	12/31/2008	4	13.0	3	
SVE-08	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	52.5	4	
	12/31/2008	4	12.5	0.8	
SVE-09	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	51.5	2	
	12/31/2008	18	3.3	1	
SVE-10	10/16/2008	NM	NM	NM	System Down
	11/20/2008	9	53.0	3	
	12/31/2008	16	3.3	2	
SVE-11	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	51.0	5	
	12/31/2008	3	13.0	0.8	
SVE-12	10/16/2008	NM	NM	NM	System Down
	11/20/2008	14	52.5	2	
	12/31/2008	6	3.3	2	
SVE-13	10/16/2008	NM	NM	NM	System Down
	11/20/2008	10	50.5	180	
	12/31/2008	7	16.0	125	

Table 3.19
Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-14	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	49.0	35	
	12/31/2008	6	10.5	150	
SVE-15	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	49.5	2	
	12/31/2008	4	4.5	45	
SVE-16	10/16/2008	NM	NM	NM	System Down
	11/20/2008	230	50.5	45	
	12/31/2008	9	15.5	50	
SVE-17	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	50.5	35	
	12/31/2008	7	10.0	60	
SVE-18	10/16/2008	NM	NM	NM	System Down
	11/20/2008	5	51.0	25	
	12/31/2008	6	16.0	125	
SVE-19	10/16/2008	NM	NM	NM	System Down
	11/20/2008	250	50.0	30	
	12/31/2008	12	5.5	45	
SVE-20	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	49.5	25	
	12/31/2008	4	16.0	35	
SVE-21	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	49.5	30	
	12/31/2008	36	10.5	30	
SVE-22	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	49.0	110	
	12/31/2008	17	0.5	80	
SVE-23	10/16/2008	NM	NM	NM	System Down
	11/20/2008	41	49.0	15	
	12/31/2008	3	5.0	160	
SVE-24	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	49.0	105	
	12/31/2008	6	11.0	165	
SVE-25	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	50.5	50	
	12/31/2008	20	16.5	140	
SVE-26	10/16/2008	NM	NM	NM	System Down
	11/20/2008	7	50.0	20	
	12/31/2008	2	5.5	120	

Table 3.19
Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-27	10/16/2008	NM	NM	NM	System Down
	11/20/2008	143	49.0	30	
	12/31/2008	5	5.5	130	
SVE-28	10/16/2008	NM	NM	NM	System Down
	11/20/2008	27	51.0	75	
	12/31/2008	14	16.0	140	
SVE-29	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	50.0	85	
	12/31/2008	2	11.0	145	
SVE-30	10/16/2008	NM	NM	NM	System Down
	11/20/2008	14	50.0	110	
	12/31/2008	7	10.5	110	
SVE-31	10/16/2008	NM	NM	NM	System Down
	11/20/2008	18	49.5	85	
	12/31/2008	5	10.0	70	
SVE-32	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	51.0	80	
	12/31/2008	4	16.0	90	
SVE-33	10/16/2008	NM	NM	NM	System Down
	11/20/2008	16	49.0	100	
	12/31/2008	5	5.5	100	
SVE-34	10/16/2008	NM	NM	NM	System Down
	11/20/2008	7	49.5	50	
	12/31/2008	4	6.0	110	
SVE-35	10/16/2008	NM	NM	NM	System Down
	11/20/2008	50	49.0	115	
	12/31/2008	15	10.0	110	
SVE-36	10/16/2008	NM	NM	NM	System Down
	11/20/2008	7	51.0	270	
	12/31/2008	11	16.0	310	
SVE-37	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	51.0	120	
	12/31/2008	11	16.5	135	
SVE-38	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	50.0	290	
	12/31/2008	6	10.0	80	
SVE-39	10/16/2008	NM	NM	NM	System Down
	11/20/2008	210	49.0	180	
	12/31/2008	18	45.0	175	

Table 3.19
Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-40	10/16/2008	NM	NM	NM	System Down
	11/20/2008	5	49.0	180	
	12/31/2008	6	5.0	175	
SVE-41	10/16/2008	NM	NM	NM	System Down
	11/20/2008	290	49.0	185	
	12/31/2008	21	9.5	190	
SVE-42	10/16/2008	NM	NM	NM	System Down
	11/20/2008	13	51.0	205	
	12/31/2008	27	15.5	130	
K-P Header 1	10/16/2008	-	NM	NM	System Down
	11/20/2008	-	53.0	4	
	12/31/2008	-	3.3	8	
K-P-Header 2	10/16/2008	-	NM	NM	System Down
	11/20/2008	-	51.5	6	
	12/31/2008	-	13.0	6	
OFCA Header 1	10/16/2008	-	NM	NM	System Down
	11/20/2008	-	50.5	20	
	12/31/2008	-	10.5	20	
OFCA Header 2	10/16/2008	-	NM	NM	System Down
	11/20/2008	-	51.0	35	
	12/31/2008	-	16.0	60	
OFCA Header 3	10/16/2008	-	NM	NM	System Down
	11/20/2008	-	51.0	50	
	12/31/2008	-	5.5	55	

Notes:

"-" = data not collected

"Water" - water present in vapor stream, preventing data collection

NM = Not measured, reason given in comments column

Flow is measured using a VelociCalc 8384 flow meter.

Vacuum pressures are measured with an Extech Manometer Model 407910.

Table 3.20
Off-Site In-Situ Soil Vapor Extraction (ISVE) System Header Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Date	KP1 Line Press (psia)	KP1 Flow (scfm)	KP1 Vac (" H ₂ O)	KP2 Line Press (psia)	KP2 Flow (scfm)	KP2 Vac (" H ₂ O)	OFCA1 Vac (" H ₂ O)	OFCA2 Vac (" H ₂ O)	OFCA3 Vac (" H ₂ O)	Dilution Flow (cfm)	Blower Inf Line Press (psia)	Blower Inf Flow (scfm)
10/16/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/20/2008	12.9	0	53	13.0	0	51.5	50.5	51	51	0	12.8	893
12/31/2008	14.8	NM	3.3	14.5	NM	13	10.5	16	5.5	NM	NM	NM

Date	Blower Inf Vac (" H ₂ O)	Blower Inf VOC (ppm)	Blower Inf Temp. (°F)	Blower Eff Line Press (psia)	Blower Eff Flow (scfm)	Blower Eff Press (" H ₂ O)	Blower Eff VOC (ppm)	Blower Eff Temp. (°F)	Filter Diff Press (" H ₂ O)	Ambient Temperature (°F)	Barometric Pressure (Hg)	Humidity (%)
10/16/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	59	30.12	72%
11/20/2008	58	-	60	15.8	811	25.0	115	124	7.0	33	30.24	52%
12/31/2008	36	-	NM	16.4	1282	40.0	NM	80	0.0	16	30.38	68%

Notes:

"_ " = Data not collected

NM = Not measured for specific date due to system being down or blower being off

cfm = Cubic feet per minute

" H₂O = Inches of water

ppm = Parts per million

VOCs = Volatile organic compounds

psia = Pounds per square inch, atmosphere

" Hg = Inches of mercury

°F = Degrees Fahrenheit

Table 3.21
SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-43	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-44	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-45	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-46	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-47	10/16/2008	NM	NM	NM	System Down
	11/20/2008	14	83.5	520	
	12/31/2008	NM	NM	NM	System Down
SVE-48	10/16/2008	NM	NM	NM	System Down
	11/20/2008	17	83.5	410	
	12/31/2008	NM	NM	NM	System Down
SVE-49	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-50	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	85.5	75	
	12/31/2008	NM	NM	NM	System Down
SVE-51	10/16/2008	NM	NM	NM	System Down
	11/20/2008	4	83.5	90	
	12/31/2008	NM	NM	NM	System Down
SVE-52	10/16/2008	NM	NM	NM	System Down
	11/20/2008	2	83.5	75	
	12/31/2008	NM	NM	NM	System Down
SVE-53	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	83.5	275	
	12/31/2008	NM	NM	NM	System Down
SVE-54	10/16/2008	NM	NM	NM	System Down
	11/20/2008	15	-	-	Air injection well
	12/31/2008	NM	NM	NM	System Down
SVE-55	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-56	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-57	10/16/2008	NM	NM	NM	System Down
	11/20/2008	4	83.5	210	
	12/31/2008	NM	NM	NM	System Down
SVE-58	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	90.5	90	
	12/31/2008	NM	NM	NM	System Down

Table 3.21
SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-59	10/16/2008	NM	NM	NM	System Down
	11/20/2008	13	-	-	Air injection well
	12/31/2008	NM	NM	NM	System Down
SVE-60	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	88.5	150	
	12/31/2008	NM	NM	NM	System Down
SVE-61	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-62	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	83.5	230	
	12/31/2008	NM	NM	NM	System Down
SVE-63	10/16/2008	NM	NM	NM	System Down
	11/20/2008	7	25.0	70	
	12/31/2008	NM	NM	NM	System Down
SVE-64	10/16/2008	NM	NM	NM	System Down
	11/20/2008	12	83.5	185	
	12/31/2008	NM	NM	NM	System Down
SVE-65	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-66	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-67	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	83.5	135	
	12/31/2008	NM	NM	NM	System Down
SVE-68	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	84.0	150	
	12/31/2008	NM	NM	NM	System Down
SVE-69	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-70	10/16/2008	NM	NM	NM	System Down
	11/20/2008	124	89.5	80	
	12/31/2008	NM	NM	NM	System Down
SVE-71	10/16/2008	NM	NM	NM	System Down
	11/20/2008	25	89.5	105	
	12/31/2008	NM	NM	NM	System Down
SVE-72	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-73	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	90	40	
	12/31/2008	NM	NM	NM	System Down
SVE-74	10/16/2008	NM	NM	NM	System Down
	11/20/2008	16	90.5	120	
	12/31/2008	NM	NM	NM	System Down

Table 3.21
SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Well ID	Date	Flow (cfm)	Vac ($\text{" H}_2\text{O}$)	VOCs (ppm)	Comments
SVE-75	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	80.5	80	
	12/31/2008	NM	NM	NM	System Down
SVE-76	10/16/2008	NM	NM	NM	System Down
	11/20/2008	47	83.5	105	
	12/31/2008	NM	NM	NM	System Down
SVE-77	10/16/2008	NM	NM	NM	System Down
	11/20/2008	21	-	-	Air injection well
	12/31/2008	NM	NM	NM	System Down
SVE-78	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	84.0	90	
	12/31/2008	NM	NM	NM	System Down
SVE-79	10/16/2008	NM	NM	NM	System Down
	11/20/2008	-	-	-	
	12/31/2008	NM	NM	NM	System Down
SVE-80	10/16/2008	NM	NM	NM	System Down
	11/20/2008	12	-	-	Air injection well
	12/31/2008	NM	NM	NM	System Down
SVE-81	10/16/2008	NM	NM	NM	System Down
	11/20/2008	9	91.5	150	
	12/31/2008	NM	NM	NM	System Down
SVE-82	10/16/2008	NM	NM	NM	System Down
	11/20/2008	5	90.5	150	
	12/31/2008	NM	NM	NM	System Down
SVE-83	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	89.5	75	
	12/31/2008	NM	NM	NM	System Down
SVE-84	10/16/2008	NM	NM	NM	System Down
	11/20/2008	15	-	-	Air injection well
	12/31/2008	NM	NM	NM	System Down
SVE-85	10/16/2008	NM	NM	NM	System Down
	11/20/2008	12	90.0	150	
	12/31/2008	NM	NM	NM	System Down
SVE-86	10/16/2008	NM	NM	NM	System Down
	11/20/2008	24	90.0	100	
	12/31/2008	NM	NM	NM	System Down
SVE-87	10/16/2008	NM	NM	NM	System Down
	11/20/2008	Water	90.5	120	
	12/31/2008	NM	NM	NM	System Down
SVE-88	10/16/2008	NM	NM	NM	System Down
	11/20/2008	6	91.5	60	
	12/31/2008	NM	NM	NM	System Down

Notes:

"-" = data not collected

"Water" - water present in vapor stream, preventing data collection

NM = Not measured, reason given in comments column

Flow is measured using a VelociCalc 8384 flow meter.

Vacuum pressures are measured with an Extech Manometer Model 407910.

Table 3.22
SBPA In-Situ Soil Vapor Extraction (ISVE) System Header Monitoring Data
Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Date	North Header			South Header			Dilution Flow (cfm)	Blower Inf Line Press (psia)	Blower Inf Flow (scfm)	Blower Inf Vac (["] H ₂ O)	Blower Inf VOC (ppm)
	Line Press (psia)	Flow (scfm)	Vac (["] H ₂ O)	Line Press (psia)	Flow (scfm)	Vac (["] H ₂ O)					
10/16/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/20/2008	11.6	987	89.5	11.6	1906	91.5	0	11.2	908	100	NM
12/31/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

Date	Blower Inf Temp. ([°] F)	Blower Eff Line Press (psia)	Blower Eff Flow (scfm)	Blower Eff Press (["] H ₂ O)	Blower Eff VOC (ppm)	Blower Eff Temp. ([°] F)	Filter Diff Press (["] H ₂ O)	Ambient Temperature ([°] F)	Barometric Pressure (["] Hg)	Humidity (%)
10/16/2008	NM	NM	NM	NM	NM	NM	NM	59	30.12	72%
11/20/2008	57	16.4	1083	43.0	NM	147	6.5	30	30.24	69%
12/31/2008	NM	NM	NM	NM	NM	NM	NM	28	30.27	66%

Notes:

"_" = Data not collected

NM = Not measured for specific date due to system being down

cfm = Cubic feet per minute

" H₂O = Inches of water

ppm = Parts per million

VOCs = Volatile organic compounds

psia = Pounds per square inch, atmosphere

" Hg = Inches of mercury

[°]F = Degrees Fahrenheit

Table 6.1
Water Table Elevations Across the Barrier Wall and Near the PGCS - Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Upper Aquifer Wells

Well Designation	Reference Points			12/11/2008		Notes	Difference Across Barrier Wall (if applicable) ¹
	East	North	TOIC	Level	Elevation		
MW11	6377	7329	640.47	5.38	635.09		n/a
MW13	5050	7814	634.08	2.89	631.19		n/a
MW37	5395	7976	636.78	4.50	632.28		n/a
MW46	4526	7424	633.32	2.49	630.83		n/a
MW48	5669	7814	636.36	4.01	632.35		n/a
MW49	5551	7650	637.00	4.45	632.55		n/a

Staff Gauges & Piezometers

Well Designation	Reference Points			12/11/2008		Notes	Difference Across Barrier Wall (if applicable) ¹
	East	North	TOSG	Level	Elevation		
P23	4689	7018	636.18	5.34	630.84		n/a
P25	5131	7510	633.33	1.56	631.77		n/a
P26	4764	7309	634.23	3.49	630.74		n/a
P27	4904	7020	639.70	9.15	630.55		n/a
P28	5883	7486	644.53	10.67	633.86		n/a
P32	5746	7026	642.32	11.56	630.76		n/a
P40	5931	7241	638.77	4.39	634.38		n/a
P41	5663	7377	637.23	3.43	633.80		n/a
P49	5145	6949	638.98	10.73	628.25		n/a
SG13	4819	7209	631.53	5.00	630.53	TOSG = 6.0' mark	n/a

PGCS Piezometer Sets

Well Designation	Reference Points			12/11/2008		Notes	Difference Across Barrier Wall (if applicable) ¹
	East	North	TOC	Level	Elevation		
P81	5577	7581	636.19	3.92	632.27		n/a
P82	5577	7572	635.77	3.83	631.94		n/a
P83	5577	7561.6	635.95	3.37	632.58		n/a
P84	5322	7603	634.35	2.57	631.78		n/a
P85	5326	7594	634.08	2.32	631.76		n/a
P86	5329	7585	634.41	2.70	631.71		n/a
P87	5121	7466	633.88	3.45	630.43		n/a
P88	5130	7460	633.90	2.65	631.25		n/a
P89	5137	7454	634.02	2.76	631.26		n/a
P90	4881	7152	634.45	3.79	630.66		n/a
P91	4889	7145	634.59	4.16	630.43		n/a
P92	4896	7138.1	633.87	3.91	629.96		n/a

Table 6.1
Water Table Elevations Across the Barrier Wall and Near the PGCS - Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

BWES Water Level and Piezometer Pairs

Well Designation	Reference Points			12/11/2008		Notes	Difference Across Barrier Wall (if applicable) ¹
	East	North	TOC	Level	Elevation		
P93R - Outside BW	n/a	n/a	639.05	7.91	631.14	Installed Nov. 2004	-2.65
P94R - Inside BW	n/a	n/a	640.99	12.50	628.49	Installed Nov. 2004	
P95 - Outside BW	5146	6532	638.58	6.01	632.57		-7.63
P96 - Inside BW	5156	6537	641.26	16.32	624.94		
P105 - Outside BW	5885	6678	638.86	3.45	635.41		-7.63
P106 - Inside BW	5871	6685	638.10	10.32	627.78		
P107 - Outside BW	5766	7339	637.42	3.50	633.92		-3.44
P108 - Inside BW	5757	7324	638.13	7.65	630.48		
P109 - Outside BW	5740	6387	644.30	9.40	634.90		-7.11
P110 - Inside BW	5705	6382	647.68	19.89	627.79		
P111 - Outside BW	5551	5950	650.03	15.93	634.10		-7.04
P112 - Inside BW	5525	5960	653.36	26.30	627.06		
P113 - Inside BW	5309	5693	657.53	30.06	627.47		-5.98
ORCPZ102 - Outside BW	5331	5612	652.47	19.02	633.45		
P114 - Inside BW	5035	5729	653.69	25.83	627.86		-5.41
P115 - Outside BW	4970	5708	652.50	19.23	633.27		
P116 - Inside BW	5031	6087	646.26	18.72	627.54		-5.71
P117 - Outside BW	5014	6087	643.93	10.68	633.25		
P118 - Inside BW	5402	6539	645.52	18.15	627.37		n/a

Notes:

All depth measurements and elevations are in units of feet.

Elevation is in feet above mean sea level.

TOIC = top of inner casing

TOC = top of casing

TOSG = top of staff gauge

n/a = not applicable

I A positive value indicates that the water level is higher inside the barrier wall. A negative value indicates that the water level is lower inside the barrier wall.

Table 6.2
Water Levels Inside Barrier Wall - Fourth Quarter 2008
American Chemical Service NPL Site
Griffith, Indiana

Date	On-Site Area					
	Target Level	P-29	P-31	P-32	P-36	P-49
10/10/2008	629.0	630.4	630.9	631.1	626.4	629.5
11/14/2008	629.0	630.4	630.9	631.0	626.4	629.4
12/5/2008	629.0	630.4	630.9	630.2	624.9	627.7
12/23/2008	629.0	630.4	630.9	NM	NM	NM

Date	Off-Site Area										
	Target Level	P-96	P-110	P-112	P-113	P-114	P-116	P-118	AS-7	AS-8	AS-9
10/10/2008	626.0	624.4	628.2	627.8	627.6	627.9	627.6	627.7	NM	NM	NM
11/14/2008	626.0	622.3	628.2	627.2	627.2	627.4	627.3	627.9	NM	NM	NM
11/25/2008	626.0	NM	627.88	627.76	627.49						
12/5/2008	626.0	621.3	627.7	626.6	626.5	626.9	626.4	627.2	NM	NM	NM
12/23/2008	626.0	NM	627.6	626.9	627.4	627.8	625.9	627.0	NM	NM	NM
12/31/2008	626.0	NM	627.63	627.57	NM						

Notes:

All water level elevations are in feet AMSL.

NM = Not measured

FIGURES

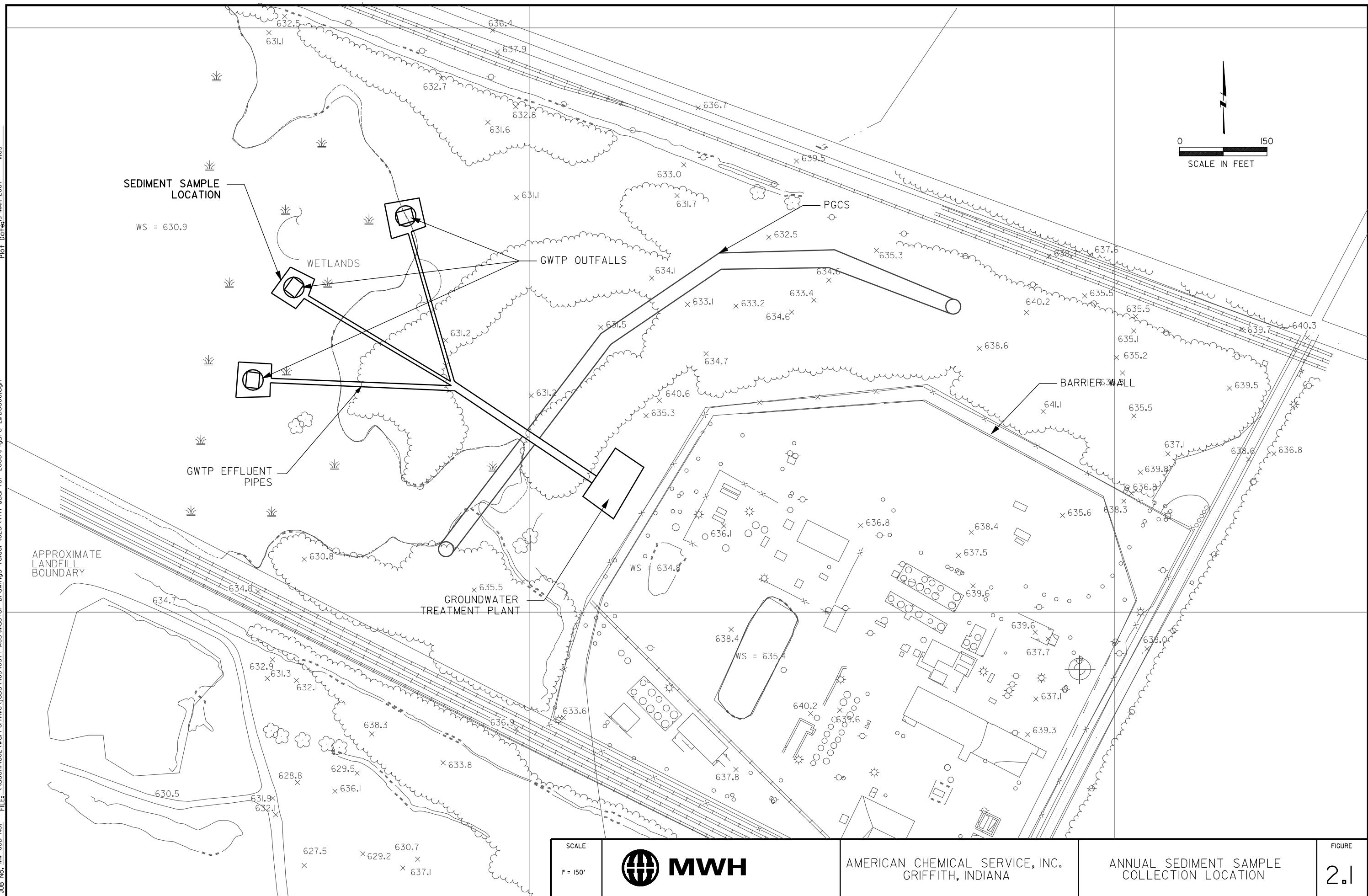


Figure 3.1
VOC Removal Rate
American Chemical Services NPL Site, Griffith, IN

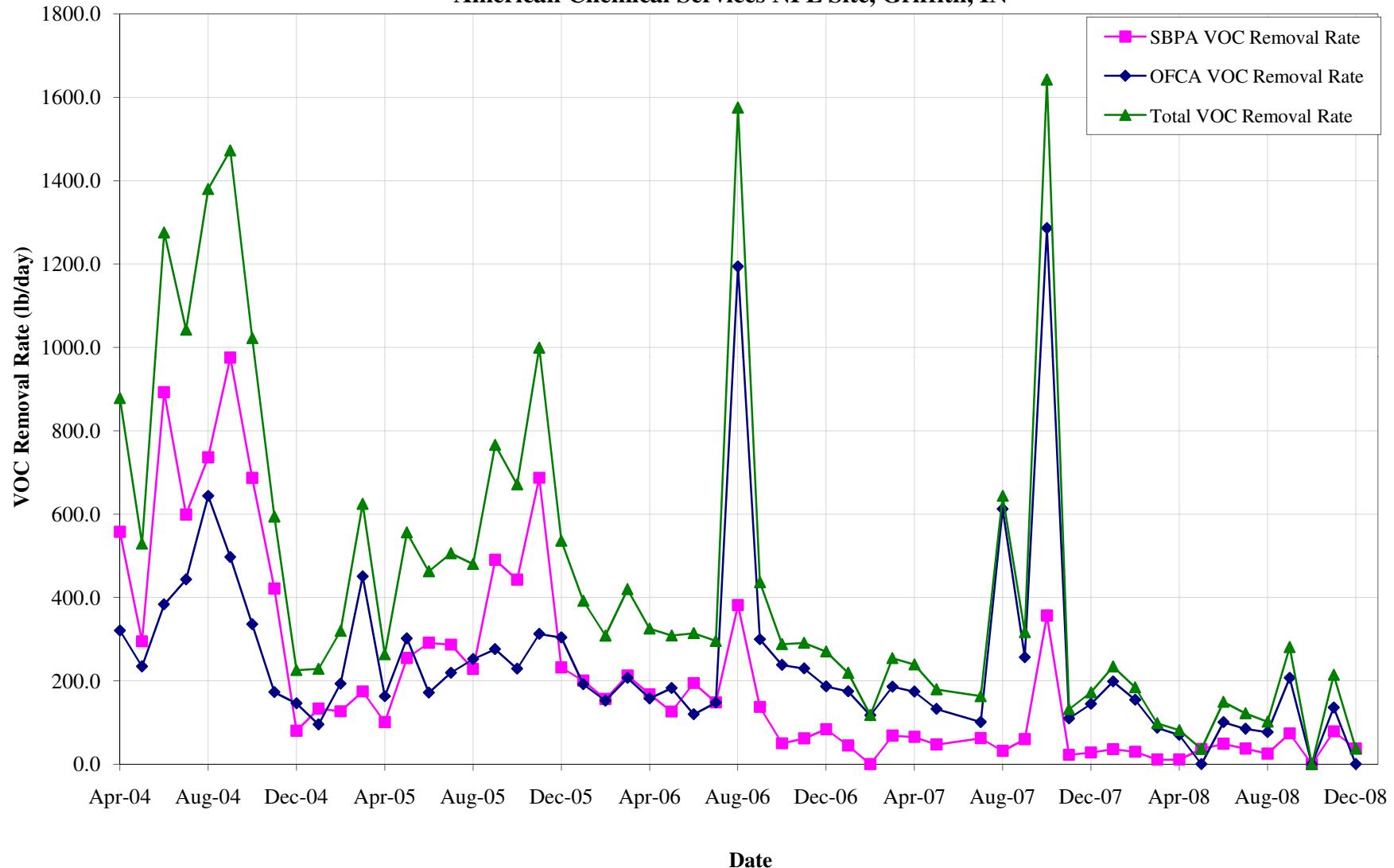
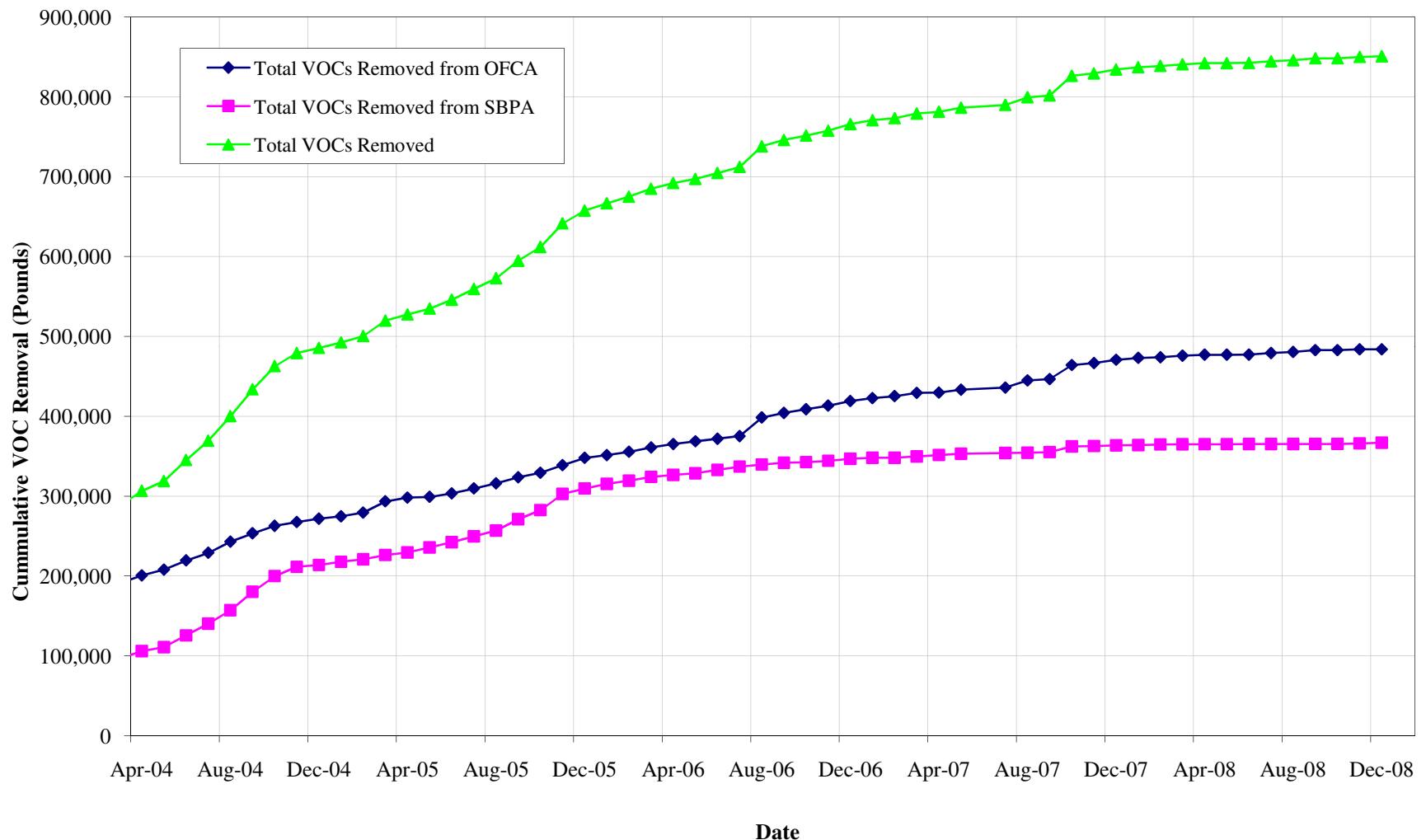
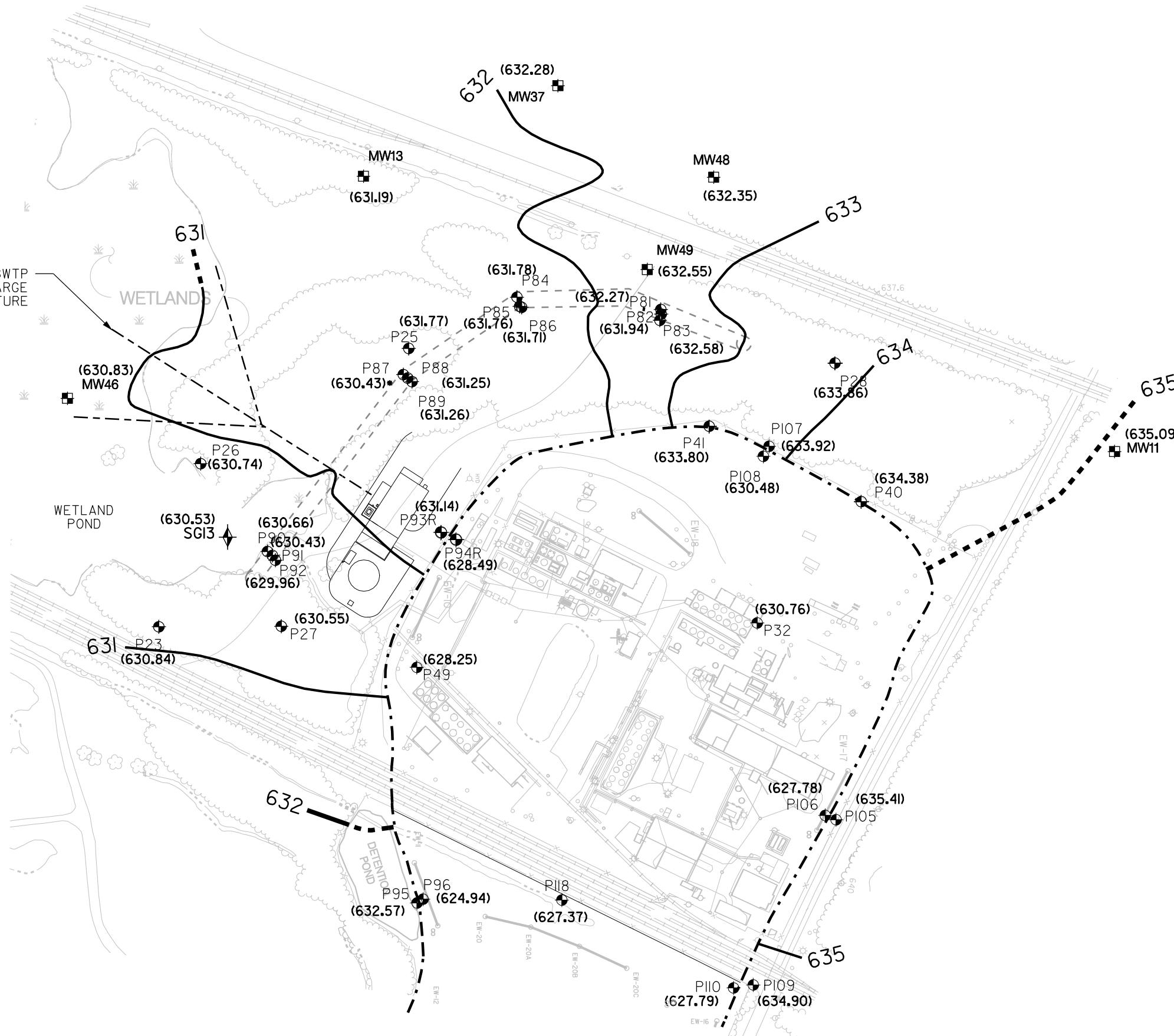


Figure 3.2
Total VOCs Removed
American Chemical Services NPL Site, Griffith, IN





LEGEND

- PI06 PIEZOMETER LOCATION AND DESIGNATION
- SGI3 STAFF GAUGE LOCATION AND DESIGNATION
- MW13 MONITORING WELL LOCATION AND DESIGNATION
- (635.09) GROUNDWATER ELEVATION
- * GROUNDWATER ELEVATION NOT USED FOR CONTOURING
- - - BARRIER WALL
- - - PERIMETER GROUND WATER CONTAINMENT SYSTEM EXTRACTION TRENCH
- EW-II BWES EXTRACTION TRENCH LOCATION AND DESIGNATION
- 634 GROUNDWATER ELEVATION CONTOUR BASED ON GROUNDWATER ELEVATION DATA (DASHED WHERE INFERRED)

NOTE

- GROUNDWATER ELEVATIONS WERE MEASURED AT THE SITE ON DECEMBER 11, 2008.

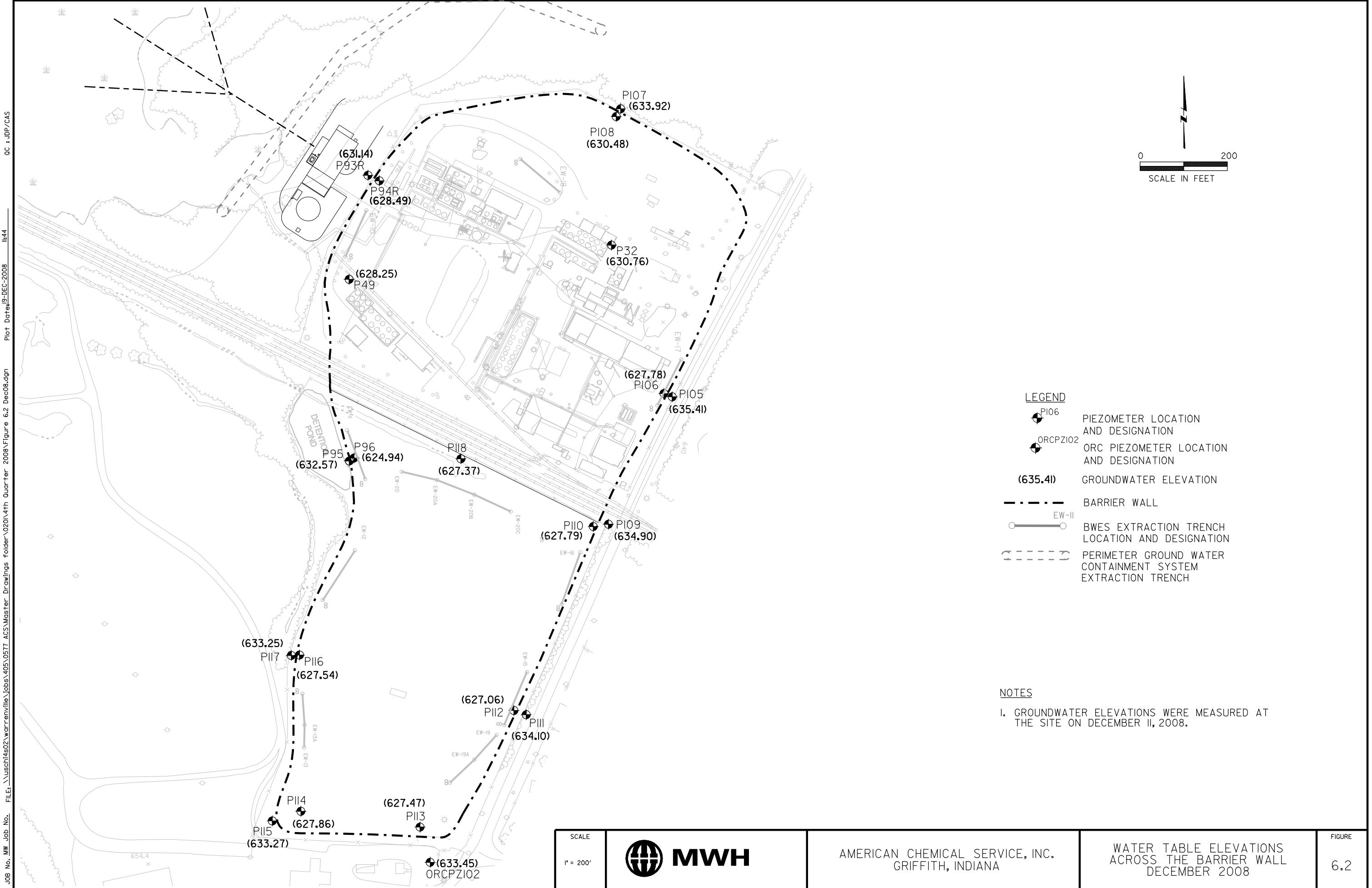
SCALE
1' = 200'



AMERICAN CHEMICAL SERVICE, INC.
GRIFFITH, INDIANA

WATER TABLE ELEVATIONS
NEAR THE PGCS
DECEMBER 2008

FIGURE
6.1

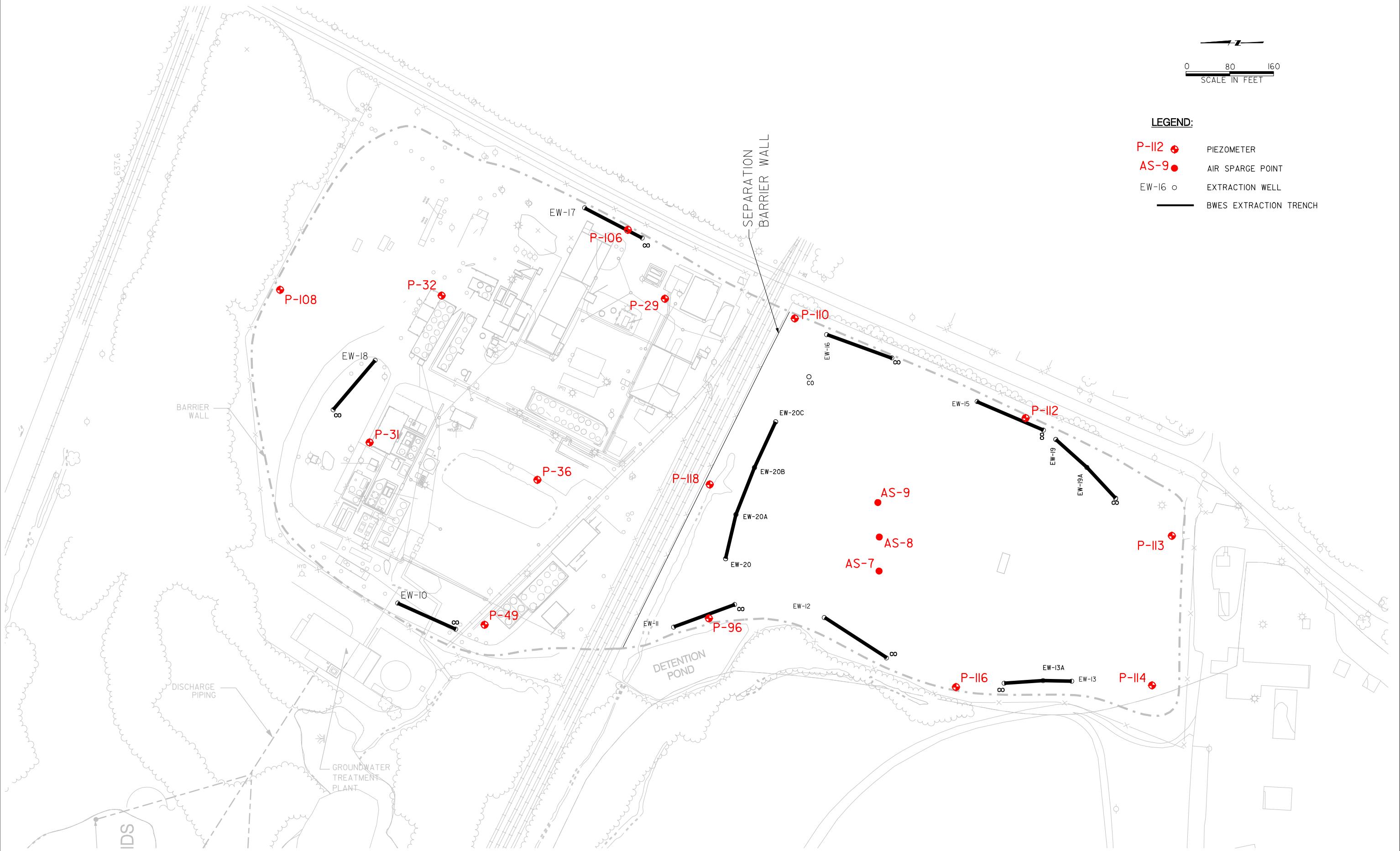


0 80 160
SCALE IN FEET

LEGEND:

- P-II2 PIEZOMETER
- AS-9 AIR SPARGE POINT
- EW-16 EXTRACTION WELL
- BWES EXTRACTION TRENCH

File: J:\405\0577 ACS\master cad files\0201\3rd quarter 2006\figure63.dgn
Plot Date: 19-MAR-2007 11:34



REV	DATE	BY	DESCRIPTION

AS SHOWN

SCALE
DESIGNED RAA
DRAWN CAD
CHECKED

SUBMITTED BY
ROBERT A. ADAMS
(PROJECT MANAGER)

LICENSE NO. DATE

(COMPANY OFFICER)

LICENSE NO. DATE



MWH
MONTGOMERY WATSON HARZA

AMERICAN CHEMICAL SERVICE SUPERFUND SITE
GRIFFITH, INDIANA

GROUNDWATER LEVEL MEASURING LOCATIONS

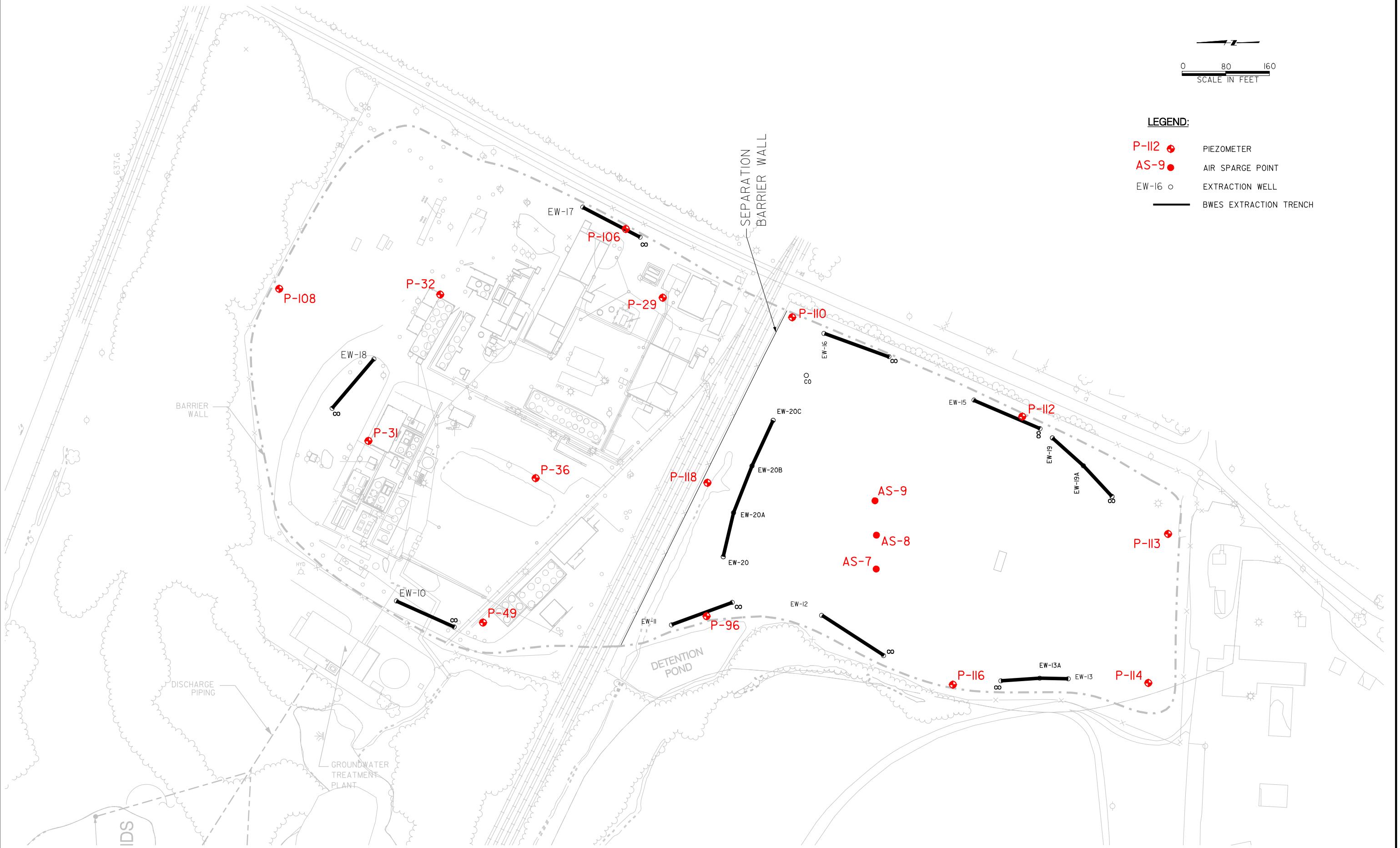
FIGURE
6.3

0 80 160
SCALE IN FEET

LEGEND:

- P-II2 • PIEZOMETER
- AS-9 • AIR SPARGE POINT
- EW-16 ○ EXTRATION WELL
- BWES EXTRACTION TRENCH

File: J:\405\0577 ACS\master cad files\0201\3rd quarter 2006\figure63.dgn
Plot Date: 19-MAR-2007 11:34



REV	DATE	BY	DESCRIPTION

AS SHOWN

SCALE

DESIGNED RAA

DRAWN CAD

SUBMITTED BY

ROBERT A. ADAMS

(PROJECT MANAGER)

LICENSE NO.

DATE

CHECKED

(COMPANY OFFICER)

LICENSE NO.

DATE



MWH
MONTGOMERY WATSON HARZA

AMERICAN CHEMICAL SERVICE SUPERFUND SITE
GRIFFITH, INDIANA

GROUNDWATER LEVEL MEASURING LOCATIONS

FIGURE
6.3

Figure 6.4
Water Level Trends Inside the Barrier Wall (Still Bottoms Pond Area)
ACS NPL Site
Griffith, Indiana

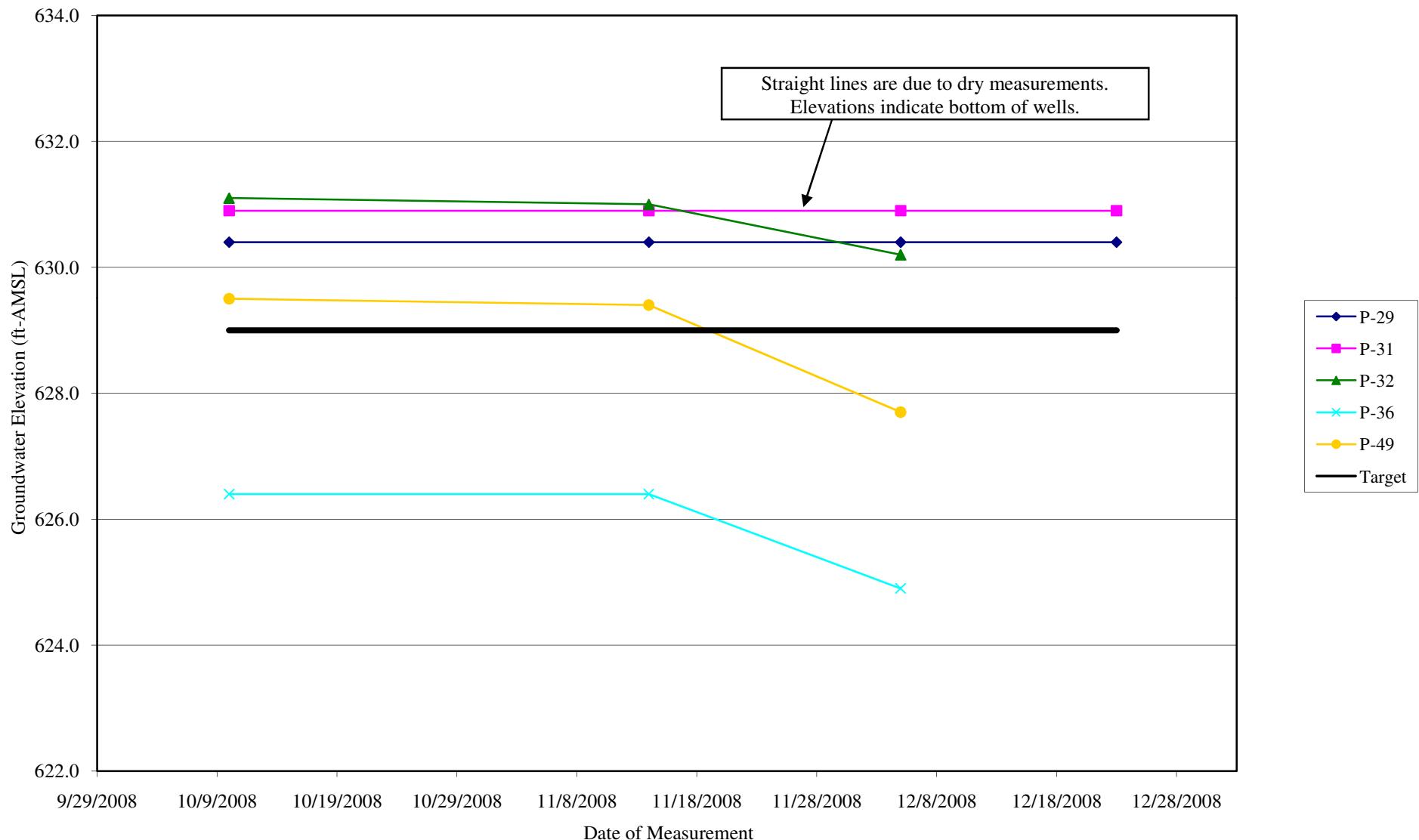
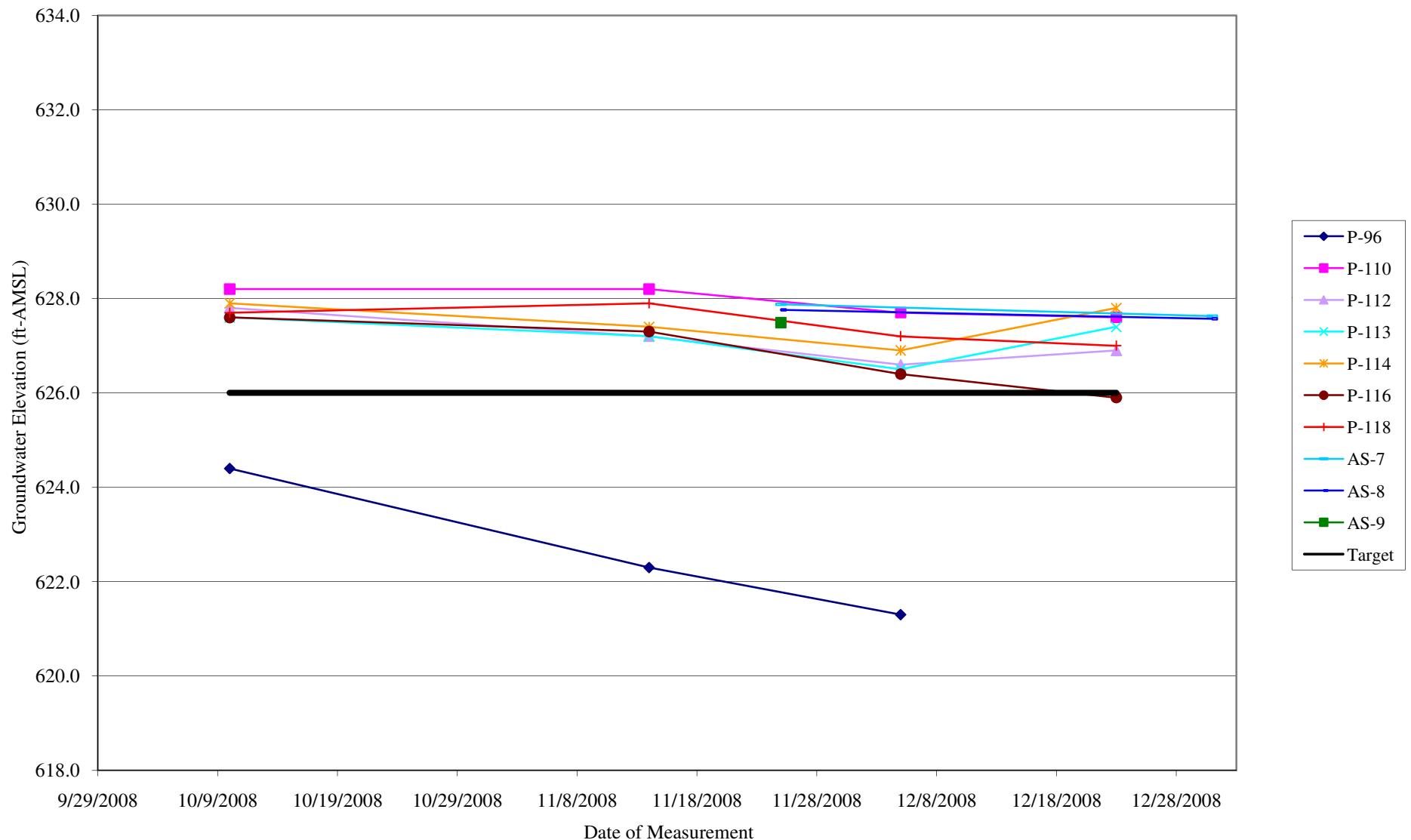


Figure 6.5
Water Level Trends Inside the Barrier Wall (Off-Site Area)
ACS NPL Site
Griffith, Indiana



APPENDIX A

EFFLUENT ANALYTICAL DATA

**October 15, 2008 Compliance Sample
Laboratory Results**



Microbac
ANALYTICAL RESULTS

Date: Thursday, October 23, 2008

Client: MWH, Inc.
Client Project: GWTP - Monthly / ACS
Client Sample ID: Effluent
Sample Description:
Sample Matrix: Aqueous

Work Order / ID: ME0810596-01
Collection Date: 10/15/08 09:35
Date Received: 10/15/08 10:10

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
----------	----	--------	-----	----	------	-------	----	----------

VOC'S	Method: SW8260B		Prep Date/Time:			Analyst: MAK		
Acetone	A	ND	0.0020	0.0050	UJ	mg/L	1	10/16/08 15:10
Benzene	A	ND	0.00030	0.0010		mg/L	1	10/16/08 15:10
2-Butanone	A	ND	0.0015	0.0020	UJ	mg/L	1	10/16/08 15:10
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	10/16/08 15:10
1,1-Dichloroethane	A	ND	0.00030	0.0010		mg/L	1	10/16/08 15:10
cis-1,2-Dichloroethene	A	ND	0.00040	0.0010		mg/L	1	10/16/08 15:10
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	10/16/08 15:10
4-Methyl-2-Pentanone	A	ND	0.00080	0.0020		mg/L	1	10/16/08 15:10
Methylene chloride	A	ND	0.00070	0.0040		mg/L	1	10/16/08 15:10
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	10/16/08 15:10
Trichloroethene	A	ND	0.00030	0.0010		mg/L	1	10/16/08 15:10
Vinyl chloride	A	ND	0.00040	0.0020		mg/L	1	10/16/08 15:10
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	10/16/08 15:10
Surr: 4-Bromofluorobenzene	S	98.3		0	75.2-115	%REC	1	10/16/08 15:10
Surr: Dibromofluoromethane	S	100		0	92.7-119	%REC	1	10/16/08 15:10
Surr: 1,2-Dichloroethane-d4	S	103		0	88.2-132	%REC	1	10/16/08 15:10
Surr: Toluene-d8	S	103		0	89.3-116	%REC	1	10/16/08 15:10

PH
pH

Method: 4500H B/9040C		Prep Date/Time:			Analyst: SMA		
A	7.78	0.02	0.02	H	pH units	1	10/22/08 13:05

12/8/08



Microbac

ANALYTICAL RESULTS

Date: Thursday, October 23, 2008

Client: MWH, Inc.
Client Project: GWTP - Monthly / ACS
Client Sample ID: Effluent
Sample Description:
Sample Matrix: Aqueous

Work Order / ID: ME0810596-01
Collection Date: 10/15/08 09:35
Date Received: 10/15/08 10:10

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
----------	----	--------	-----	----	------	-------	----	----------

VOG'S	Method: SW8260B		Prep Date/Time:			Analyst: MAK		
Acetone	A	ND	0.0020	0.0050	mg/L	1	10/16/08 15:10	
Benzene	A	ND	0.00030	0.0010	mg/L	1	10/16/08 15:10	
2-Butanone	A	ND	0.0015	0.0020	mg/L	1	10/16/08 15:10	
Chloromethane	A	ND	0.00030	0.0020	mg/L	1	10/16/08 15:10	
1,1-Dichloroethane	A	ND	0.00030	0.0010	mg/L	1	10/16/08 15:10	
cis-1,2-Dichloroethene	A	ND	0.00040	0.0010	mg/L	1	10/16/08 15:10	
Ethylbenzene	A	ND	0.00020	0.0010	mg/L	1	10/16/08 15:10	
4-Methyl-2-Pentanone	A	ND	0.00080	0.0020	mg/L	1	10/16/08 15:10	
Methylene chloride	A	ND	0.00070	0.0040	mg/L	1	10/16/08 15:10	
Tetrachloroethene	A	ND	0.00040	0.0010	mg/L	1	10/16/08 15:10	
Trichloroethene	A	ND	0.00030	0.0010	mg/L	1	10/16/08 15:10	
Vinyl chloride	A	ND	0.00040	0.0020	mg/L	1	10/16/08 15:10	
1,4-Dichlorobenzene	A	ND	0.00020	0.0010	mg/L	1	10/16/08 15:10	
Surr: 4-Bromofluorobenzene	S	98.3	0	75.2-115	%REC	1	10/16/08 15:10	
Surr: Dibromofluoromethane	S	100	0	92.7-119	%REC	1	10/16/08 15:10	
Surr: 1,2-Dichloroethane-d4	S	103	0	88.2-132	%REC	1	10/16/08 15:10	
Surr: Toluene-d8	S	103	0	89.3-116	%REC	1	10/16/08 15:10	

PH	Method: 4500H B/9040C		Prep Date/Time:			Analyst: SMA		
pH	A	7.78	0.02	0.02	H	pH units	1	10/22/08 13:05

10/22/08

**November 18, 2008 Compliance Sample
Laboratory Results**

ANALYTICAL RESULTS

Date: Wednesday, November 26, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Quarterly GWTP / ACS
Client Sample ID: Effluent
Sample Description:
Sample Matrix: Aqueous

Work Order / ID: ME0811673-01
Collection Date: 11/18/08 13:15
Date Received: 11/18/08 14:10

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
----------	----	--------	-----	----	------	-------	----	----------

PCB'S		Method: SW8082		Prep Date/Time: 11/19/08 08:49 Analyst: JLW				
Aroclor 1016	A	ND	0.00011	0.00051		mg/L	1	11/21/08 14:28
Aroclor 1221	A	ND	0.00051	0.00051		mg/L	1	11/21/08 14:28
Aroclor 1232	A	ND	0.00051	0.00051		mg/L	1	11/21/08 14:28
Aroclor 1242	A	ND	0.000099	0.00051		mg/L	1	11/21/08 14:28
Aroclor 1248	A	ND	0.00014	0.00051		mg/L	1	11/21/08 14:28
Aroclor 1254	A	ND	0.00017	0.00051		mg/L	1	11/21/08 14:28
Aroclor 1260	A	ND	0.00011	0.00051		mg/L	1	11/21/08 14:28
<i>Surr: Tetrachloro-m-xylene</i>	S	95.0		0	45.2-114	%REC	1	11/21/08 14:28
<i>Surr: Decachlorobiphenyl</i>	S	85.0		0	11.6-136	%REC	1	11/21/08 14:28

TOTAL METALS		Method: SW6010B		Prep Date/Time: 11/19/08 15:00 Analyst: AVC					
Arsenic	A	0.0075	0.0025	0.010	J	mg/L	1	11/20/08 10:53	UB
Beryllium	A	ND	0.00000000014	0.0010		mg/L	1	11/20/08 10:53	
Cadmium	A	ND	0.00030	0.0020		mg/L	1	11/20/08 10:53	
Manganese	A	0.30	0.00030	0.0020		mg/L	1	11/20/08 10:53	B
Selenium	A	ND	0.0053	0.030		mg/L	1	11/20/08 10:53	
Thallium	A	ND	0.0043	0.050		mg/L	1	11/20/08 10:53	
Zinc	A	ND	0.0073	0.020		mg/L	1	11/20/08 10:53	

TOTAL METALS		Method: SW7470A		Prep Date/Time: 11/24/08 16:00 Analyst: SAA					
Mercury	A	ND	0.000030	0.00020		mg/L	1	11/25/08 11:44	

SEMOVOLATILE ORGANICS		Method: SW8270C		Prep Date/Time: 11/20/08 06:23 Analyst: BEM					
Bis(2-ethylhexyl)phthalate	A	0.00073	0.00056	0.0051	J	mg/L	1	11/20/08 23:27	
Bis(2-chloroethyl)ether	A	ND	0.00046	0.0051		mg/L	1	11/20/08 23:27	
2,2'-oxybis(1-chloropropane)	A	ND	0.00046	0.0051		mg/L	1	11/20/08 23:27	
Isophorone	A	ND	0.00051	0.0051		mg/L	1	11/20/08 23:27	
3/4-Methylphenol	A	ND	0.00041	0.0051		mg/L	1	11/20/08 23:27	
Pentachlorophenol	A	ND	0.00066	0.026		mg/L	1	11/20/08 23:27	
<i>Surr: Nitrobenzene-d5</i>	S	58.4	0	10-121		%REC	1	11/20/08 23:27	
<i>Surr: 2-Fluorobiphenyl</i>	S	57.1	0	10-109		%REC	1	11/20/08 23:27	
<i>Surr: Terphenyl-d14</i>	S	65.4	0	10-130		%REC	1	11/20/08 23:27	
<i>Surr: Phenol-d5</i>	S	23.4	0	10-100		%REC	1	11/20/08 23:27	
<i>Surr: 2-Fluorophenol</i>	S	32.6	0	10-84.7		%REC	1	11/20/08 23:27	
<i>Surr: 2,4,6-Tribromophenol</i>	S	75.9	0	10-120		%REC	1	11/20/08 23:27	

VOLWS

Method: SW8260B

Prep Date/Time:

Analyst: CLR

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

ANALYTICAL RESULTS

Date: Wednesday, November 26, 2008

Client:	MWH, Inc.	Work Order / ID:	ME0811673-01
Client Project:	Nov 2008 - Quarterly GWTP / ACS	Collection Date:	11/18/08 13:15
Client Sample ID:	Effluent	Date Received:	11/18/08 14:10
Sample Description:			
Sample Matrix:	Aqueous		

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
----------	----	--------	-----	----	------	-------	----	----------

VOC'S		Method:	SW8260B		Prep Date/Time:		Analyst:	CLR
Acetone	A	ND	0.0020	0.0050	mg/L	1	11/21/08 04:03	WJ
Benzene	A	ND	0.00030	0.0010	mg/L	1	11/21/08 04:03	
2-Butanone	A	ND	0.0015	0.0020	mg/L	1	11/21/08 04:03	
Chloromethane	A	ND	0.00030	0.0020	mg/L	1	11/21/08 04:03	
1,1-Dichloroethane	A	ND	0.00030	0.0010	mg/L	1	11/21/08 04:03	
cis-1,2-Dichloroethene	A	ND	0.00040	0.0010	mg/L	1	11/21/08 04:03	
Ethylbenzene	A	ND	0.00020	0.0010	mg/L	1	11/21/08 04:03	
4-Methyl-2-Pentanone	A	ND	0.00080	0.0040	mg/L	1	11/21/08 04:03	
Methylene chloride	A	ND	0.00070	0.0020	mg/L	1	11/21/08 04:03	
Tetrachloroethene	A	ND	0.00040	0.0010	mg/L	1	11/21/08 04:03	
Trichloroethene	A	ND	0.00030	0.0010	mg/L	1	11/21/08 04:03	
Vinyl chloride	A	ND	0.00040	0.0020	mg/L	1	11/21/08 04:03	
1,4-Dichlorobenzene	A	ND	0.00020	0.0010	mg/L	1	11/21/08 04:03	
Surr: 4-Bromofluorobenzene	S	95.1		0	75.2-115	%REC	1	11/21/08 04:03
Surr: Dibromofluoromethane	S	103		0	92.7-119	%REC	1	11/21/08 04:03
Surr: 1,2-Dichloroethane-d4	S	103		0	88.2-132	%REC	1	11/21/08 04:03
Surr: Toluene-d8	S	103		0	89.3-116	%REC	1	11/21/08 04:03

BOD, 5 DAY		Method: 5210B_18ED		Prep Date/Time: 11/18/08 23:00		Analyst: GBZ		
Biochemical Oxygen Demand	A	ND	2.0	2.0	mg/L	1	11/18/08 23:30	
PH		Method: 4500H B/9040C		Prep Date/Time:		Analyst: SMA		
pH	A	8.14	0.02	0.02	H	pH units	1	11/24/08 08:45
TOTAL SUSPENDED SOLIDS		Method: 2540D_18ED		Prep Date/Time:		Analyst: SMA		
Total Suspended Solids	A	1.0	1.0	1.0	mg/L	1	11/20/08 08:04	

44111508

**December 29, 2008 Compliance Sample
Laboratory Results**

ANALYTICAL RESULTS

Date: Monday, January 05, 2009

Client: MWH, Inc.
Client Project: GWTP - Monthly / ACS
Client Sample ID: Effluent
Sample Description:
Sample Matrix: Aqueous

Work Order / ID: ME0812983-01
Collection Date: 12/29/08 14:55
Date Received: 12/29/08 15:44

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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VOC'S	Method: SW8260B			Prep Date/Time:			Analyst: CLR	
Acetone	A	ND	0.0020	0.0050	mg/L	1	12/31/08 14:53	UJ
Benzene	A	ND	0.00030	0.0010	mg/L	1	12/31/08 14:53	UJ
2-Butanone	A	ND	0.0015	0.0020	mg/L	1	12/31/08 14:53	
Chloromethane	A	ND	0.00030	0.0020	mg/L	1	12/31/08 14:53	
1,1-Dichloroethane	A	0.0014	0.00030	0.0010	mg/L	1	12/31/08 14:53	
cis-1,2-Dichloroethene	A	0.0024	0.00040	0.0010	mg/L	1	12/31/08 14:53	
Ethylbenzene	A	ND	0.00020	0.0010	mg/L	1	12/31/08 14:53	
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010	mg/L	1	12/31/08 14:53	
Methylene chloride	A	0.0015	0.00070	0.0020	J	mg/L	1	12/31/08 14:53
Tetrachloroethene	A	ND	0.00040	0.0010	mg/L	1	12/31/08 14:53	
Trichloroethene	A	ND	0.00030	0.0010	mg/L	1	12/31/08 14:53	
Vinyl chloride	A	0.0013	0.00040	0.0020	J	mg/L	1	12/31/08 14:53
1,4-Dichlorobenzene	A	ND	0.00020	0.0010	mg/L	1	12/31/08 14:53	
Surr: 4-Bromofluorobenzene	S	94.0	0	75.2-115	%REC	1	12/31/08 14:53	
Surr: Dibromofluoromethane	S	103	0	92.7-119	%REC	1	12/31/08 14:53	
Surr: 1,2-Dichloroethane-d4	S	96.4	0	88.2-132	%REC	1	12/31/08 14:53	
Surr: Toluene-d8	S	99.4	0	89.3-116	%REC	1	12/31/08 14:53	

Method: 4500H B/9040C Prep Date/Time: Analyst: SMA

pH	A	7.03	0.02	0.02	H	pH units	1	12/30/08 08:30
----	---	------	------	------	---	----------	---	----------------

ANALYTICAL RESULTS

Date: Monday, January 05, 2009

Client: MWH, Inc.
Client Project: GWTP - Monthly / ACS
Client Sample ID: Effluent
Sample Description:
Sample Matrix: Aqueous

Work Order / ID: ME0812983-01
Collection Date: 12/29/08 14:55
Date Received: 12/29/08 15:44

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
----------	----	--------	-----	----	------	-------	----	----------

VOC'S		Method:	SW8260B			Prep Date/Time:	Analyst: CLR	
Acetone	A	ND	0.0020	0.0050		mg/L	1	12/31/08 14:53
Benzene	A	ND	0.00030	0.0010		mg/L	1	12/31/08 14:53
2-Butanone	A	ND	0.0015	0.0020		mg/L	1	12/31/08 14:53
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	12/31/08 14:53
1,1-Dichloroethane	A	0.0014	0.00030	0.0010		mg/L	1	12/31/08 14:53
cis-1,2-Dichloroethene	A	0.0024	0.00040	0.0010		mg/L	1	12/31/08 14:53
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	12/31/08 14:53
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010		mg/L	1	12/31/08 14:53
Methylene chloride	A	0.0015	0.00070	0.0020	J	mg/L	1	12/31/08 14:53
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	12/31/08 14:53
Trichloroethene	A	ND	0.00030	0.0010		mg/L	1	12/31/08 14:53
Vinyl chloride	A	0.0013	0.00040	0.0020	J	mg/L	1	12/31/08 14:53
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	12/31/08 14:53
Surr: 4-Bromofluorobenzene	S	94.0	0	75.2-115		%REC	1	12/31/08 14:53
Surr: Dibromofluoromethane	S	103	0	92.7-119		%REC	1	12/31/08 14:53
Surr: 1,2-Dichloroethane-d4	S	96.4	0	88.2-132		%REC	1	12/31/08 14:53
Surr: Toluene-d8	S	99.4	0	89.3-116		%REC	1	12/31/08 14:53

PH		Method:	4500H B/9040C			Prep Date/Time:	Analyst: SMA	
pH	A	7.03	0.02	0.02	H	pH units	1	12/30/08 08:30

APPENDIX B

THERMAL OXIDIZER OFF-GAS ANALYTICAL DATA

November 21, 2008 Off-Gas Sample Laboratory Results

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #1 Offsite ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-01A
Collection Date: 11/21/08 12:08
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method:	TO-15		Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	21000	410	1400	ppbv	,00	12/04/08 23:14	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/05/08 00:37	
1,1,2-Trichloroethane	A	100	10	30	ppbv	60	12/05/08 00:37	
1,1-Dichloroethane	A	3300	42	150	ppbv	300	12/04/08 23:55	
1,1-Dichloroethene	A	110	10	30	ppbv	60	12/05/08 00:37	
1,2-Dichloroethane	A	390	10	30	ppbv	60	12/05/08 00:37	
1,2-Dichloropropane	A	130	8.4	30	ppbv	60	12/05/08 00:37	
2-Butanone	A	5200	36	590	ppbv	300	12/04/08 23:55	
2-Hexanone	A	ND	20	120	ppbv	60	12/05/08 00:37	
4-Methyl-2-Pentanone	A	2600	71	150	ppbv	300	12/04/08 23:55	
Acetone	A	4200	170	590	ppbv	300	12/04/08 23:55	
Benzene	A	9000	330	1400	ppbv	,00	12/04/08 23:14	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/05/08 00:37	
Bromoform	A	ND	10	30	ppbv	60	12/05/08 00:37	
Bromomethane	A	ND	11	30	ppbv	60	12/05/08 00:37	
Carbon disulfide	A	ND	11	30	ppbv	60	12/05/08 00:37	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/05/08 00:37	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/05/08 00:37	
Chloroethane	A	210	10	30	ppbv	60	12/05/08 00:37	
Chloroform	A	1900	36	150	ppbv	300	12/04/08 23:55	
Chloromethane	A	23	14	120	J	ppbv	60	12/05/08 00:37
cis-1,2-Dichloroethene	A	9100	380	1400	ppbv	,00	12/04/08 23:14	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/05/08 00:37	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/05/08 00:37	
Ethyl benzene	A	7200	490	1400	ppbv	,00	12/04/08 23:14	
m,p-Xylene	A	30000	820	2700	ppbv	,00	12/04/08 23:14	
Methylene chloride	A	23000	380	11000	ppbv	,00	12/04/08 23:14	
o-Xylene	A	12000	460	1400	ppbv	,00	12/04/08 23:14	
Styrene	A	220	11	30	ppbv	60	12/05/08 00:37	
Tetrachloroethene	A	15000	460	1400	ppbv	,00	12/04/08 23:14	
Toluene	A	32000	450	1300	ppbv	,00	12/05/08 13:04	
trans-1,2-Dichloroethene	A	55	19	30	ppbv	60	12/05/08 00:37	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/05/08 00:37	
Trichloroethene	A	13000	440	1400	ppbv	,00	12/04/08 23:14	
Vinyl chloride	A	920	9	30	ppbv	60	12/05/08 00:37	
Surr: 4-Bromofluorobenzene	S	107	0	77.7-127	%REC	60	12/05/08 00:37	

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #1 Offsite ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-01B
Collection Date: 11/21/08 12:08
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
1,2-Dichlorobenzene	A	8.1	0.7	10	J	µg, Total	1	12/04/08 21:37
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	12/04/08 21:37
1,4-Dichlorobenzene	A	1.3	0.9	10	J	µg, Total	1	12/04/08 21:37
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	12/04/08 21:37
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	12/04/08 21:37
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	12/04/08 21:37
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	12/04/08 21:37
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	12/04/08 21:37
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	12/04/08 21:37
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	12/04/08 21:37
2-Methylnaphthalene	A	1.7	0.9	10	J	µg, Total	1	12/04/08 21:37
2-Methylphenol	A	ND	0.7	10		µg, Total	1	12/04/08 21:37
2-Nitroaniline	A	ND	1	50		µg, Total	1	12/04/08 21:37
2-Nitrophenol	A	ND	1	10		µg, Total	1	12/04/08 21:37
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	12/04/08 21:37
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	12/04/08 21:37
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	12/04/08 21:37
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	12/04/08 21:37
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	12/04/08 21:37
4-Chloroaniline	A	ND	1	20		µg, Total	1	12/04/08 21:37
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	12/04/08 21:37
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	12/04/08 21:37
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	12/04/08 21:37
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
Bis(2-ethylhexyl)phthalate	A	1.9	1.1	10	J	µg, Total	1	12/04/08 21:37
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	12/04/08 21:37
Carbazole	A	ND	1.2	10		µg, Total	1	12/04/08 21:37
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	12/04/08 21:37
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 21:37
Dibenzofuran	A	ND	0.8	10		µg, Total	1	12/04/08 21:37
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 21:37
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	12/04/08 21:37

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M1309

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #1 Offsite ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-01B
Collection Date: 11/21/08 12:08
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD		Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Hexachlorobutadiene	A	1.4	0.9	10	J	µg, Total	1	12/04/08 21:37
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/04/08 21:37
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/04/08 21:37
Isophorone	A	9.6	1	10	J	µg, Total	1	12/04/08 21:37
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/04/08 21:37
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/04/08 21:37
Nitrobenzene	A	ND	1	10		µg, Total	1	12/04/08 21:37
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/04/08 21:37
Phenol	A	ND	0.4	10		µg, Total	1	12/04/08 21:37
Surr: 2,4,6-Tribromophenol	S	54.0	0	39.4-112		%REC	1	12/04/08 21:37
Surr: 2-Fluorobiphenyl	S	62.5	0	21.6-123		%REC	1	12/04/08 21:37
Surr: 2-Fluorophenol	S	50.5	0	27.7-78		%REC	1	12/04/08 21:37
Surr: Nitrobenzene-d5	S	61.7	0	36.9-89.6		%REC	1	12/04/08 21:37
Surr: Phenol-d5	S	56.1	0	46.1-73.5		%REC	1	12/04/08 21:37
Surr: Terphenyl-d14	S	65.0	0	55.8-111		%REC	1	12/04/08 21:37

PAHS BY GC/MS-SIM Method: TO-13		Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/04/08 21:37
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/04/08 21:37
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/04/08 21:37
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/04/08 21:37
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/04/08 21:37
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/04/08 21:37
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/04/08 21:37
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/04/08 21:37
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/04/08 21:37
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/04/08 21:37
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/04/08 21:37
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/04/08 21:37
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	12/04/08 21:37
Naphthalene	A	13	0.16	1.0		µg, Total	1	12/04/08 21:37
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/04/08 21:37
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/04/08 21:37
Surr: Nitrobenzene-d5	S	61.7	0	36.9-89.6		%REC	1	12/04/08 21:37
Surr: 2-Fluorobiphenyl	S	62.5	0	21.6-123		%REC	1	12/04/08 21:37
Surr: Terphenyl-d14	S	65.0	0	55.8-111		%REC	1	12/04/08 21:37

11/13/08

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #2 SBPA ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-02A
Collection Date: 11/21/08 12:09
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	24000	410	1400	ppbv	,00	12/05/08 01:18	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/05/08 02:41	
1,1,2-Trichloroethane	A	44	10	30	ppbv	60	12/05/08 02:41	
1,1-Dichloroethane	A	3700	42	150	ppbv	300	12/05/08 01:59	
1,1-Dichloroethene	A	200	10	30	ppbv	60	12/05/08 02:41	
1,2-Dichloroethane	A	260	10	30	ppbv	60	12/05/08 02:41	
1,2-Dichloropropane	A	210	8.4	30	ppbv	60	12/05/08 02:41	
2-Butanone	A	4000	36	590	ppbv	300	12/05/08 01:59	
2-Hexanone	A	ND	20	120	ppbv	60	12/05/08 02:41	
4-Methyl-2-Pentanone	A	1400	71	150	ppbv	300	12/05/08 01:59	
Acetone	A	3600	170	590	ppbv	300	12/05/08 01:59	UBJ
Benzene	A	8700	330	1400	ppbv	,00	12/05/08 01:18	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/05/08 02:41	
Bromoform	A	ND	10	30	ppbv	60	12/05/08 02:41	
Bromomethane	A	ND	11	30	ppbv	60	12/05/08 02:41	
Carbon disulfide	A	ND	11	30	ppbv	60	12/05/08 02:41	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/05/08 02:41	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/05/08 02:41	
Chloroethane	A	400	10	30	ppbv	60	12/05/08 02:41	
Chloroform	A	4200	36	150	ppbv	300	12/05/08 01:59	
Chloromethane	A	26	14	120	J	ppbv	60	12/05/08 02:41
cis-1,2-Dichloroethene	A	29000	380	1400	ppbv	,00	12/05/08 01:18	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/05/08 02:41	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/05/08 02:41	
Ethyl benzene	A	4500	53	150	ppbv	300	12/05/08 01:59	
m,p-Xylene	A	23000	820	2700	ppbv	,00	12/05/08 01:18	
Methylene chloride	A	25000	380	11000	ppbv	,00	12/05/08 01:18	
o-Xylene	A	10000	460	1400	ppbv	,00	12/05/08 01:18	
Styrene	A	66	11	30	ppbv	60	12/05/08 02:41	
Tetrachloroethene	A	25000	460	1400	ppbv	,00	12/05/08 01:18	
Toluene	A	32000	490	1400	ppbv	,00	12/05/08 01:18	
trans-1,2-Dichloroethene	A	140	19	30	ppbv	60	12/05/08 02:41	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/05/08 02:41	
Trichloroethene	A	18000	440	1400	ppbv	,00	12/05/08 01:18	
Vinyl chloride	A	3000	45	150	ppbv	300	12/05/08 01:59	
<i>Sur: 4-Bromofluorobenzene</i>	S	105	0	77.7-127	%REC	60	12/05/08 02:41	

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #2 SBPA ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-02B
Collection Date: 11/21/08 12:09
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD			Prep Date/Time:	11/25/08 11:15	Analyst:	BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
1,2-Dichlorobenzene	A	12	0.7	10		µg, Total	1	12/04/08 22:04
1,3-Dichlorobenzene	A	1.3	0.8	10	J	µg, Total	1	12/04/08 22:04
1,4-Dichlorobenzene	A	3.3	0.9	10	J	µg, Total	1	12/04/08 22:04
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	12/04/08 22:04
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	12/04/08 22:04
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	12/04/08 22:04
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	12/04/08 22:04
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	12/04/08 22:04
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	12/04/08 22:04
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	12/04/08 22:04
2-Methylnaphthalene	A	1.9	0.9	10	J	µg, Total	1	12/04/08 22:04
2-Methylphenol	A	ND	0.7	10		µg, Total	1	12/04/08 22:04
2-Nitroaniline	A	ND	1	50		µg, Total	1	12/04/08 22:04
2-Nitrophenol	A	ND	1	10		µg, Total	1	12/04/08 22:04
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	12/04/08 22:04
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	12/04/08 22:04
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	12/04/08 22:04
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	12/04/08 22:04
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	12/04/08 22:04
4-Chloroaniline	A	ND	1	20		µg, Total	1	12/04/08 22:04
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	12/04/08 22:04
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	12/04/08 22:04
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	12/04/08 22:04
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
Bis(2-ethylhexyl)phthalate	A	1.7	1.1	10	J	µg, Total	1	12/04/08 22:04
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	12/04/08 22:04
Carbazole	A	ND	1.2	10		µg, Total	1	12/04/08 22:04
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	12/04/08 22:04
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 22:04
Dibenzofuran	A	ND	0.8	10		µg, Total	1	12/04/08 22:04
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 22:04
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	12/04/08 22:04

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #2 SBPA ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-02B
Collection Date: 11/21/08 12:09
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD		Prep Date/Time: 11/25/08 11:15 Analyst: BEM					
Hexachlorobutadiene	A	4	0.9	10	J	µg, Total	1	12/04/08 22:04
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/04/08 22:04
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/04/08 22:04
Isophorone	A	4	1	10	J	µg, Total	1	12/04/08 22:04
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/04/08 22:04
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/04/08 22:04
Nitrobenzene	A	ND	1	10		µg, Total	1	12/04/08 22:04
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/04/08 22:04
Phenol	A	ND	0.4	10		µg, Total	1	12/04/08 22:04
<i>Surr: 2,4,6-Tribromophenol</i>	S	54.1	0	39.4-112		%REC	1	12/04/08 22:04
<i>Surr: 2-Fluorobiphenyl</i>	S	69.9	0	21.6-123		%REC	1	12/04/08 22:04
<i>Surr: 2-Fluorophenol</i>	S	50.4	0	27.7-78		%REC	1	12/04/08 22:04
<i>Surr: Nitrobenzene-d5</i>	S	65.4	0	36.9-89.6		%REC	1	12/04/08 22:04
<i>Surr: Phenol-d5</i>	S	58.0	0	46.1-73.5		%REC	1	12/04/08 22:04
<i>Surr: Terphenyl-d14</i>	S	70.8	0	55.8-111		%REC	1	12/04/08 22:04

PAHS BY GC/MS-SIM	Method: TO-13		Prep Date/Time: 11/25/08 11:15 Analyst: BEM					
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/04/08 22:04
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/04/08 22:04
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/04/08 22:04
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/04/08 22:04
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/04/08 22:04
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/04/08 22:04
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/04/08 22:04
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/04/08 22:04
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/04/08 22:04
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/04/08 22:04
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/04/08 22:04
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/04/08 22:04
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	12/04/08 22:04
Naphthalene	A	5.3	0.16	1.0		µg, Total	1	12/04/08 22:04
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/04/08 22:04
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/04/08 22:04
<i>Surr: Nitrobenzene-d5</i>	S	65.4	0	36.9-89.6		%REC	1	12/04/08 22:04
<i>Surr: 2-Fluorobiphenyl</i>	S	69.9	0	21.6-123		%REC	1	12/04/08 22:04
<i>Surr: Terphenyl-d14</i>	S	70.8	0	55.8-111		%REC	1	12/04/08 22:04

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #3 TOX I Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-03A
Collection Date: 11/21/08 12:30
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method:	TO-15	Prep Date/Time:			Analyst: MAK	
1,1,1-Trichloroethane	A	16000	350	1200	ppbv	,000	12/05/08 03:22	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/05/08 04:44	
1,1,2-Trichloroethane	A	39	10	30	ppbv	60	12/05/08 04:44	
1,1-Dichloroethane	A	3400	42	150	ppbv	300	12/05/08 04:02	
1,1-Dichloroethene	A	180	10	30	ppbv	60	12/05/08 04:44	
1,2-Dichloroethane	A	240	10	30	ppbv	60	12/05/08 04:44	
1,2-Dichloropropane	A	190	8.4	30	ppbv	60	12/05/08 04:44	
2-Butanone	A	3400	36	590	ppbv	300	12/05/08 04:02	
2-Hexanone	A	ND	20	120	ppbv	60	12/05/08 04:44	
4-Methyl-2-Pentanone	A	1300	71	150	ppbv	300	12/05/08 04:02	
Acetone	A	2900	170	590	ppbv	300	12/05/08 04:02	
Benzene	A	5800	36	150	ppbv	300	12/05/08 04:02	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/05/08 04:44	
Bromoform	A	ND	10	30	ppbv	60	12/05/08 04:44	
Bromomethane	A	ND	11	30	ppbv	60	12/05/08 04:44	
Carbon disulfide	A	ND	11	30	ppbv	60	12/05/08 04:44	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/05/08 04:44	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/05/08 04:44	
Chloroethane	A	390	10	30	ppbv	60	12/05/08 04:44	
Chloroform	A	3900	36	150	ppbv	300	12/05/08 04:02	
Chloromethane	A	23	14	120	J	ppbv	60	12/05/08 04:44
cis-1,2-Dichloroethene	A	19000	320	1200	ppbv	,00	12/05/08 03:22	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/05/08 04:44	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/05/08 04:44	
Ethyl benzene	A	4100	53	150	ppbv	300	12/05/08 04:02	
m,p-Xylene	A	14000	690	2300	ppbv	,00	12/05/08 03:22	
Methylene chloride	A	17000	320	9200	ppbv	,00	12/05/08 03:22	
o-Xylene	A	6500	390	1200	ppbv	,00	12/05/08 03:22	
Styrene	A	59	11	30	ppbv	60	12/05/08 04:44	
Tetrachloroethene	A	16000	390	1200	ppbv	,00	12/05/08 03:22	
Toluene	A	20000	420	1200	ppbv	,00	12/05/08 03:22	
trans-1,2-Dichloroethene	A	130	19	30	ppbv	60	12/05/08 04:44	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/05/08 04:44	
Trichloroethene	A	12000	370	1200	ppbv	,00	12/05/08 03:22	
Vinyl chloride	A	2700	45	150	ppbv	300	12/05/08 04:02	
Surr: 4-Bromofluorobenzene	S	104	0	77.7-127	%REC	60	12/05/08 04:44	

6/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #3 TOX 1 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-03B
Collection Date: 11/21/08 12:30
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
1,2-Dichlorobenzene	A	4.3	0.7	10	J	µg, Total	1	12/04/08 22:32
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	12/04/08 22:32
1,4-Dichlorobenzene	A	1.3	0.9	10	J	µg, Total	1	12/04/08 22:32
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	12/04/08 22:32
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	12/04/08 22:32
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	12/04/08 22:32
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	12/04/08 22:32
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	12/04/08 22:32
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	12/04/08 22:32
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	12/04/08 22:32
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
2-Methylphenol	A	ND	0.7	10		µg, Total	1	12/04/08 22:32
2-Nitroaniline	A	ND	1	50		µg, Total	1	12/04/08 22:32
2-Nitrophenol	A	ND	1	10		µg, Total	1	12/04/08 22:32
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	12/04/08 22:32
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	12/04/08 22:32
3,4-Methylphenol	A	ND	0.8	10		µg, Total	1	12/04/08 22:32
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	12/04/08 22:32
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	12/04/08 22:32
4-Chloroaniline	A	ND	1	20		µg, Total	1	12/04/08 22:32
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	12/04/08 22:32
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	12/04/08 22:32
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	12/04/08 22:32
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 22:32
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	12/04/08 22:32
Carbazole	A	ND	1.2	10		µg, Total	1	12/04/08 22:32
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	12/04/08 22:32
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 22:32
Dibenzofuran	A	ND	0.8	10		µg, Total	1	12/04/08 22:32
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	12/04/08 22:32
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	12/04/08 22:32

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

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ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #3 TOX 1 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-03B
Collection Date: 11/21/08 12:30
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Hexachlorobutadiene	A	0.94	0.9	10	J	µg, Total	1	12/04/08 22:32
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/04/08 22:32
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/04/08 22:32
Isophorone	A	ND	1	10		µg, Total	1	12/04/08 22:32
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/04/08 22:32
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/04/08 22:32
Nitrobenzene	A	ND	1	10		µg, Total	1	12/04/08 22:32
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/04/08 22:32
Phenol	A	ND	0.4	10		µg, Total	1	12/04/08 22:32
Surr: 2,4,6-Tribromophenol	S	48.4	0	39.4-112		%REC	1	12/04/08 22:32
Surr: 2-Fluorobiphenyl	S	54.9	0	21.6-123		%REC	1	12/04/08 22:32
Surr: 2-Fluorophenol	S	44.4	0	27.7-78		%REC	1	12/04/08 22:32
Surr: Nitrobenzene-d5	S	51.8	0	36.9-89.6		%REC	1	12/04/08 22:32
Surr: Phenol-d5	S	50.1	0	46.1-73.5		%REC	1	12/04/08 22:32
Surr: Terphenyl-d14	S	61.6	0	55.8-111		%REC	1	12/04/08 22:32

PAHS BY GC/MS-SIM		Method: TO-13 Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/04/08 22:32
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/04/08 22:32
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/04/08 22:32
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/04/08 22:32
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/04/08 22:32
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/04/08 22:32
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/04/08 22:32
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/04/08 22:32
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/04/08 22:32
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/04/08 22:32
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/04/08 22:32
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/04/08 22:32
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	12/04/08 22:32
Naphthalene	A	0.94	0.16	1.0	J	µg, Total	1	12/04/08 22:32
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/04/08 22:32
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/04/08 22:32
Surr: Nitrobenzene-d5	S	51.8	0	36.9-89.6		%REC	1	12/04/08 22:32
Surr: 2-Fluorobiphenyl	S	54.9	0	21.6-123		%REC	1	12/04/08 22:32
Surr: Terphenyl-d14	S	61.6	0	55.8-111		%REC	1	12/04/08 22:32

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11/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #4 TOX 1 Influent (Dup)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-04A
Collection Date: 11/21/08 12:55
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	600	9	30	ppbv	60	12/06/08 00:21	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	12/06/08 09:51	
1,1,2-Trichloroethane	A	0.73	0.17	0.50	ppbv	1	12/06/08 09:51	
1,1-Dichloroethane	A	28	0.7	2.5	ppbv	5	12/06/08 09:09	
1,1-Dichloroethene	A	1.6	0.17	0.50	ppbv	1	12/06/08 09:51	
1,2-Dichloroethane	A	3.0	0.17	0.50	ppbv	1	12/06/08 09:51	
1,2-Dichloropropane	A	2.1	0.14	0.50	ppbv	1	12/06/08 09:51	
2-Butanone	A	42	0.6	10	ppbv	5	12/06/08 09:09	
2-Hexanone	A	ND	0.34	2.0	ppbv	1	12/06/08 09:51	
4-Methyl-2-Pentanone	A	18	0.24	0.50	ppbv	1	12/06/08 09:51	
Acetone	A	50	2.8	10	ppbv	5	12/06/08 09:09	
Benzene	A	61	0.6	2.5	ppbv	5	12/06/08 09:09	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	12/06/08 09:51	
Bromoform	A	ND	0.17	0.50	ppbv	1	12/06/08 09:51	
Bromomethane	A	ND	0.19	0.50	ppbv	1	12/06/08 09:51	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	12/06/08 09:51	
Carbon tetrachloride	A	ND	0.16	0.50	ppbv	1	12/06/08 09:51	
Chlorobenzene	A	ND	0.16	0.50	ppbv	1	12/06/08 09:51	
Chloroethane	A	3.6	0.17	0.50	ppbv	1	12/06/08 09:51	
Chloroform	A	38	0.6	2.5	ppbv	5	12/06/08 09:09	
Chloromethane	A	0.71	0.23	2.0	J	ppbv	1	12/06/08 09:51
cis-1,2-Dichloroethene	A	580	8.4	30	ppbv	60	12/06/08 00:21	
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	12/06/08 09:51	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	12/06/08 09:51	
Ethyl benzene	A	97	0.9	2.5	ppbv	5	12/06/08 09:09	
m,p-Xylene	A	860	18	60	ppbv	60	12/06/08 00:21	
Methylene chloride	A	570	8.4	240	ppbv	60	12/06/08 00:21	
o-Xylene	A	400	10	30	ppbv	60	12/06/08 00:21	
Styrene	A	2.4	0.19	0.50	ppbv	1	12/06/08 09:51	
Tetrachloroethene	A	750	10	30	ppbv	60	12/06/08 00:21	
Toluene	A	1100	11	30	ppbv	60	12/06/08 00:21	
trans-1,2-Dichloroethene	A	1.2	0.31	0.50	ppbv	1	12/06/08 09:51	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	12/06/08 09:51	
Trichloroethene	A	440	9.6	30	ppbv	60	12/06/08 00:21	
Vinyl chloride	A	24	0.75	2.5	ppbv	5	12/06/08 09:09	
Surr: 4-Bromofluorobenzene	S	102	0	77.7-127	%REC	1	12/06/08 09:51	

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #4 TOX 1 Influent (Dup)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-04B
Collection Date: 11/21/08 12:55
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
					Prep Date/Time: 11/25/08 11:15	Analyst: BEM		
1,2,4-Trichlorobenzene	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
1,2-Dichlorobenzene	A	ND	0.7	10	µg, Total	1	12/04/08 23:00	
1,3-Dichlorobenzene	A	ND	0.8	10	µg, Total	1	12/04/08 23:00	
1,4-Dichlorobenzene	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
2,4,5-Trichlorophenol	A	ND	1.5	10	µg, Total	1	12/04/08 23:00	
2,4,6-Trichlorophenol	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
2,4-Dichlorophenol	A	ND	0.7	10	µg, Total	1	12/04/08 23:00	
2,4-Dimethylphenol	A	ND	0.8	10	µg, Total	1	12/04/08 23:00	
2,4-Dinitrophenol	A	ND	9.4	50	µg, Total	1	12/04/08 23:00	
2,4-Dinitrotoluene	A	ND	0.8	10	µg, Total	1	12/04/08 23:00	
2,6-Dinitrotoluene	A	ND	1.1	10	µg, Total	1	12/04/08 23:00	
2-Chloronaphthalene	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
2-Chlorophenol	A	ND	0.7	10	µg, Total	1	12/04/08 23:00	
2-Methylnaphthalene	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
2-Methylphenol	A	ND	0.7	10	µg, Total	1	12/04/08 23:00	
2-Nitroaniline	A	ND	1	50	µg, Total	1	12/04/08 23:00	
2-Nitrophenol	A	ND	1	10	µg, Total	1	12/04/08 23:00	UJ
3,3'-Dichlorobenzidine	A	ND	0.7	50	µg, Total	1	12/04/08 23:00	UJ
3-Nitroaniline	A	ND	1.3	50	µg, Total	1	12/04/08 23:00	UJ
3/4-Methylphenol	A	ND	0.8	10	µg, Total	1	12/04/08 23:00	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	µg, Total	1	12/04/08 23:00	UJ
4-Bromophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	UJ
4-Chloro-3-methylphenol	A	ND	1.2	20	µg, Total	1	12/04/08 23:00	
4-Chloroaniline	A	ND	1	20	µg, Total	1	12/04/08 23:00	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	UJ
4-Nitroaniline	A	ND	1.7	50	µg, Total	1	12/04/08 23:00	UJ
4-Nitrophenol	A	ND	4.3	50	µg, Total	1	12/04/08 23:00	UJ
Bis(2-chloroethoxy)methane	A	ND	1	10	µg, Total	1	12/04/08 23:00	
Bis(2-chloroethyl)ether	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	
Bis(2-ethylhexyl)phthalate	A	1.4	1.1	10	J	µg, Total	1	12/04/08 23:00
Butyl benzyl phthalate	A	ND	1	10	µg, Total	1	12/04/08 23:00	UJ
Carbazole	A	ND	1.2	10	µg, Total	1	12/04/08 23:00	UJ
Di-n-butyl phthalate	A	ND	1.2	10	µg, Total	1	12/04/08 23:00	UJ
Di-n-octyl phthalate	A	ND	1.1	10	µg, Total	1	12/04/08 23:00	
Dibenzofuran	A	ND	0.8	10	µg, Total	1	12/04/08 23:00	UJ
Diethyl phthalate	A	ND	1.1	10	µg, Total	1	12/04/08 23:00	UJ
Dimethyl phthalate	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	UJ
Hexachlorobenzene	A	ND	0.9	10	µg, Total	1	12/04/08 23:00	UJ

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #4 TOX 1 Influent (Dup)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-04B
Collection Date: 11/21/08 12:55
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	12/04/08 23:00
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/04/08 23:00
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/04/08 23:00
Isophorone	A	ND	1	10		µg, Total	1	12/04/08 23:00
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/04/08 23:00
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/04/08 23:00
Nitrobenzene	A	ND	1	10		µg, Total	1	12/04/08 23:00
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/04/08 23:00
Phenol	A	ND	0.4	10		µg, Total	1	12/04/08 23:00
<i>Surr: 2,4,6-Tribromophenol</i>	S	47.8	0	39.4-112	%REC	1	12/04/08 23:00	UJ
<i>Surr: 2-Fluorobiphenyl</i>	S	65.9	0	21.6-123	%REC	1	12/04/08 23:00	UJ
<i>Surr: 2-Fluorophenol</i>	S	51.8	0	27.7-78	%REC	1	12/04/08 23:00	UJ
<i>Surr: Nitrobenzene-d5</i>	S	61.8	0	36.9-89.6	%REC	1	12/04/08 23:00	UJ
<i>Surr: Phenol-d5</i>	S	56.6	0	46.1-73.5	%REC	1	12/04/08 23:00	UJ
<i>Surr: Terphenyl-d14</i>	S	64.2	0	55.8-111	%REC	1	12/04/08 23:00	UJ

PAHS BY GC/MS-SIM		Method: TO-13 Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/04/08 23:00
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/04/08 23:00
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/04/08 23:00
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/04/08 23:00
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/04/08 23:00
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/04/08 23:00
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/04/08 23:00
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/04/08 23:00
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/04/08 23:00
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/04/08 23:00
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/04/08 23:00
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/04/08 23:00
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	12/04/08 23:00
Naphthalene	A	ND	0.16	1.0		µg, Total	1	12/04/08 23:00
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/04/08 23:00
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/04/08 23:00
<i>Surr: Nitrobenzene-d5</i>	S	61.8	0	36.9-89.6	%REC	1	12/04/08 23:00	UJ
<i>Surr: 2-Fluorobiphenyl</i>	S	65.9	0	21.6-123	%REC	1	12/04/08 23:00	UJ
<i>Surr: Terphenyl-d14</i>	S	64.2	0	55.8-111	%REC	1	12/04/08 23:00	UJ

11/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #5 TOX 1 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-05A
Collection Date: 11/21/08 12:35
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	120	6.8	23	ppbv	50	12/04/08 18:27	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	12/04/08 19:48	
1,1,2-Trichloroethane	A	0.74	0.17	0.50	ppbv	1	12/04/08 19:48	
1,1-Dichloroethane	A	23	0.69	2.5	ppbv	5	12/04/08 19:06	
1,1-Dichloroethene	A	84	0.84	2.5	ppbv	5	12/04/08 19:06	
1,2-Dichloroethane	A	3.4	0.17	0.50	ppbv	1	12/04/08 19:48	
1,2-Dichloropropane	A	ND	0.14	0.50	ppbv	1	12/04/08 19:48	
2-Butanone	A	40	0.59	9.9	ppbv	5	12/04/08 19:06	
2-Hexanone	A	ND	0.34	2.0	ppbv	1	12/04/08 19:48	
4-Methyl-2-Pentanone	A	17	0.24	0.50	ppbv	1	12/04/08 19:48	
Acetone	A	53	2.8	9.9	ppbv	5	12/04/08 19:06	
Benzene	A	98	0.59	2.5	ppbv	5	12/04/08 19:06	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	12/04/08 19:48	
Bromoform	A	ND	0.17	0.50	ppbv	1	12/04/08 19:48	
Bromomethane	A	ND	0.19	0.50	ppbv	1	12/04/08 19:48	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	12/04/08 19:48	
Carbon tetrachloride	A	ND	0.16	0.50	ppbv	1	12/04/08 19:48	
Chlorobenzene	A	ND	0.16	0.50	ppbv	1	12/04/08 19:48	
Chloroethane	A	1.8	0.17	0.50	ppbv	1	12/04/08 19:48	
Chloroform	A	16	0.12	0.50	ppbv	1	12/04/08 19:48	
Chloromethane	A	4.3	0.23	2.0	ppbv	1	12/04/08 19:48	
cis-1,2-Dichloroethene	A	77	0.69	2.5	ppbv	5	12/04/08 19:06	
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	12/04/08 19:48	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	12/04/08 19:48	
Ethyl benzene	A	39	0.89	2.5	ppbv	5	12/04/08 19:06	
m,p-Xylene	A	160	1.5	5.0	ppbv	5	12/04/08 19:06	
Methylene chloride	A	210	6.4	180	ppbv	50	12/04/08 18:27	
o-Xylene	A	63	0.84	2.5	ppbv	5	12/04/08 19:06	
Styrene	A	11	0.19	0.50	ppbv	1	12/04/08 19:48	
Tetrachloroethene	A	170	7.7	23	ppbv	50	12/04/08 18:27	
Toluene	A	370	8.2	23	ppbv	50	12/04/08 18:27	
trans-1,2-Dichloroethene	A	26	1.5	2.5	ppbv	5	12/04/08 19:06	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	12/04/08 19:48	
Trichloroethene	A	130	7.3	23	ppbv	50	12/04/08 18:27	
Vinyl chloride	A	34	0.74	2.5	ppbv	5	12/04/08 19:06	
Surr: 4-Bromofluorobenzene	S	102	0	77.7-127	%REC	1	12/04/08 19:48	

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #5 TOX 1 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-05B
Collection Date: 11/21/08 12:35
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
1,2-Dichlorobenzene	A	ND	0.7	10	μg, Total	1	12/04/08 23:25	
1,3-Dichlorobenzene	A	ND	0.8	10	μg, Total	1	12/04/08 23:25	
1,4-Dichlorobenzene	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
2,4,5-Trichlorophenol	A	ND	1.5	10	μg, Total	1	12/04/08 23:25	
2,4,6-Trichlorophenol	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
2,4-Dichlorophenol	A	ND	0.7	10	μg, Total	1	12/04/08 23:25	
2,4-Dimethylphenol	A	ND	0.8	10	μg, Total	1	12/04/08 23:25	
2,4-Dinitrophenol	A	ND	9.4	50	μg, Total	1	12/04/08 23:25	
2,4-Dinitrotoluene	A	ND	0.8	10	μg, Total	1	12/04/08 23:25	
2,6-Dinitrotoluene	A	ND	1.1	10	μg, Total	1	12/04/08 23:25	
2-Chloronaphthalene	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
2-Chlorophenol	A	ND	0.7	10	μg, Total	1	12/04/08 23:25	
2-Methylnaphthalene	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
2-Methylphenol	A	ND	0.7	10	μg, Total	1	12/04/08 23:25	
2-Nitroaniline	A	ND	1	50	μg, Total	1	12/04/08 23:25	
2-Nitrophenol	A	ND	1	10	μg, Total	1	12/04/08 23:25	
3,3'-Dichlorobenzidine	A	ND	0.7	50	μg, Total	1	12/04/08 23:25	
3-Nitroaniline	A	ND	1.3	50	μg, Total	1	12/04/08 23:25	
3/4-Methylphenol	A	ND	0.8	10	μg, Total	1	12/04/08 23:25	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	μg, Total	1	12/04/08 23:25	
4-Bromophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
4-Chloro-3-methylphenol	A	ND	1.2	20	μg, Total	1	12/04/08 23:25	
4-Chloroaniline	A	ND	1	20	μg, Total	1	12/04/08 23:25	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
4-Nitroaniline	A	ND	1.7	50	μg, Total	1	12/04/08 23:25	
4-Nitrophenol	A	ND	4.3	50	μg, Total	1	12/04/08 23:25	
Bis(2-chloroethoxy)methane	A	ND	1	10	μg, Total	1	12/04/08 23:25	
Bis(2-chloroethyl)ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
Bis(2-ethylhexyl)phthalate	A	2.4	1.1	10	J	μg, Total	1	12/04/08 23:25
Butyl benzyl phthalate	A	ND	1	10	μg, Total	1	12/04/08 23:25	
Carbazole	A	ND	1.2	10	μg, Total	1	12/04/08 23:25	
Di-n-butyl phthalate	A	ND	1.2	10	μg, Total	1	12/04/08 23:25	
Di-n-octyl phthalate	A	ND	1.1	10	μg, Total	1	12/04/08 23:25	
Dibenzofuran	A	ND	0.8	10	μg, Total	1	12/04/08 23:25	
Diethyl phthalate	A	ND	1.1	10	μg, Total	1	12/04/08 23:25	
Dimethyl phthalate	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	
Hexachlorobenzene	A	ND	0.9	10	μg, Total	1	12/04/08 23:25	

11/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #5 TOX 1 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-05B
Collection Date: 11/21/08 12:35
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD		Prep Date/Time: 11/25/08 11:15 Analyst: BEM					
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	12/04/08 23:25	UJ
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	12/04/08 23:25	UJ
Hexachloroethane	A	ND	0.9	10	µg, Total	1	12/04/08 23:25	UJ
Isophorone	A	ND	1	10	µg, Total	1	12/04/08 23:25	UJ
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	12/04/08 23:25	UJ
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	12/04/08 23:25	UJ
Nitrobenzene	A	ND	1	10	µg, Total	1	12/04/08 23:25	UJ
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	12/04/08 23:25	UJ
Phenol	A	ND	0.4	10	µg, Total	1	12/04/08 23:25	UJ
Surr: 2,4,6-Tribromophenol	S	43.8	0	39.4-112	%REC	1	12/04/08 23:25	UJ
Surr: 2-Fluorobiphenyl	S	59.7	0	21.6-123	%REC	1	12/04/08 23:25	UJ
Surr: 2-Fluorophenol	S	48.8	0	27.7-78	%REC	1	12/04/08 23:25	UJ
Surr: Nitrobenzene-d5	S	58.1	0	36.9-89.6	%REC	1	12/04/08 23:25	UJ
Surr: Phenol-d5	S	53.1	0	46.1-73.5	%REC	1	12/04/08 23:25	UJ
Surr: Terphenyl-d14	S	59.3	0	55.8-111	%REC	1	12/04/08 23:25	UJ

PAHS BY GC/MS-SIM	Method: TO-13		Prep Date/Time: 11/25/08 11:15 Analyst: BEM					
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	12/04/08 23:25	UJ
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	12/04/08 23:25	UJ
Anthracene	A	ND	0.27	1.0	µg, Total	1	12/04/08 23:25	UJ
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	12/04/08 23:25	UJ
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	12/04/08 23:25	UJ
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	12/04/08 23:25	UJ
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	12/04/08 23:25	UJ
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	12/04/08 23:25	UJ
Chrysene	A	ND	0.57	1.0	µg, Total	1	12/04/08 23:25	UJ
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	12/04/08 23:25	UJ
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	12/04/08 23:25	UJ
Fluorene	A	ND	0.25	1.0	µg, Total	1	12/04/08 23:25	UJ
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	12/04/08 23:25	UJ
Naphthalene	A	ND	0.16	1.0	µg, Total	1	12/04/08 23:25	UJ
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	12/04/08 23:25	UJ
Pyrene	A	ND	0.44	1.0	µg, Total	1	12/04/08 23:25	UJ
Surr: Nitrobenzene-d5	S	58.1	0	36.9-89.6	%REC	1	12/04/08 23:25	UJ
Surr: 2-Fluorobiphenyl	S	59.7	0	21.6-123	%REC	1	12/04/08 23:25	UJ
Surr: Terphenyl-d14	S	59.3	0	55.8-111	%REC	1	12/04/08 23:25	UJ

F11369

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #6 TOX 2 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-06A
Collection Date: 11/21/08 13:00
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15			Prep Date/Time:			Analyst: MAK
1,1,1-Trichloroethane	A	15000	300	1000	ppbv	,00	12/05/08 07:26	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/05/08 08:48	
1,1,2-Trichloroethane	A	110	10	30	ppbv	60	12/05/08 08:48	
1,1-Dichloroethane	A	3200	42	150	ppbv	300	12/05/08 08:06	
1,1-Dichloroethene	A	77	10	30	ppbv	60	12/05/08 08:48	
1,2-Dichloroethane	A	440	10	30	ppbv	60	12/05/08 08:48	
1,2-Dichloropropane	A	110	8.4	30	ppbv	60	12/05/08 08:48	
2-Butanone	A	5100	36	590	ppbv	300	12/05/08 08:06	
2-Hexanone	A	ND	20	120	ppbv	60	12/05/08 08:48	
4-Methyl-2-Pentanone	A	1400	71	150	ppbv	300	12/05/08 08:06	
Acetone	A	6000	1100	4000	ppbv	,00	12/05/08 07:26	UBJ
Benzene	A	6600	240	1000	ppbv	,00	12/05/08 07:26	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/05/08 08:48	
Bromoform	A	ND	10	30	ppbv	60	12/05/08 08:48	
Bromomethane	A	ND	11	30	ppbv	60	12/05/08 08:48	
Carbon disulfide	A	ND	11	30	ppbv	60	12/05/08 08:48	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/05/08 08:48	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/05/08 08:48	
Chloroethane	A	150	10	30	ppbv	60	12/05/08 08:48	
Chloroform	A	1400	36	150	ppbv	300	12/05/08 08:06	
Chloromethane	A	25	14	120	J	ppbv	60	12/05/08 08:48
cis-1,2-Dichloroethene	A	2900	42	150	ppbv	300	12/05/08 08:06	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/05/08 08:48	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/05/08 08:48	
Ethyl benzene	A	5100	360	1000	ppbv	,00	12/05/08 07:26	
m,p-Xylene	A	21000	600	2000	ppbv	,00	12/05/08 07:26	
Methylene chloride	A	15000	280	8000	ppbv	,00	12/05/08 07:26	
o-Xylene	A	7900	340	1000	ppbv	,00	12/05/08 07:26	
Styrene	A	250	11	30	ppbv	60	12/05/08 08:48	
Tetrachloroethene	A	8600	340	1000	ppbv	,00	12/05/08 07:26	
Toluene	A	58000	1500	4100	ppbv	,00	12/08/08 13:46	
trans-1,2-Dichloroethene	A	31	19	30	ppbv	60	12/05/08 08:48	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/05/08 08:48	
Trichloroethene	A	8100	320	1000	ppbv	,00	12/05/08 07:26	
Vinyl chloride	A	520	9	30	ppbv	60	12/05/08 08:48	
Surr: 4-Bromofluorobenzene	S	114	0	77.7-127	%REC	60	12/05/08 08:48	

11/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #6 TOX 2 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-06B
Collection Date: 11/21/08 13:00
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD			Prep Date/Time:	11/25/08 11:15	Analyst:	BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
1,2-Dichlorobenzene	A	6.2	0.7	10	J μg, Total	1	12/04/08 23:50	
1,3-Dichlorobenzene	A	ND	0.8	10	μg, Total	1	12/04/08 23:50	
1,4-Dichlorobenzene	A	1.2	0.9	10	J μg, Total	1	12/04/08 23:50	
2,4,5-Trichlorophenol	A	ND	1.5	10	μg, Total	1	12/04/08 23:50	
2,4,6-Trichlorophenol	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
2,4-Dichlorophenol	A	ND	0.7	10	μg, Total	1	12/04/08 23:50	
2,4-Dimethylphenol	A	0.99	0.8	10	J μg, Total	1	12/04/08 23:50	
2,4-Dinitrophenol	A	ND	9.4	50	μg, Total	1	12/04/08 23:50	
2,4-Dinitrotoluene	A	ND	0.8	10	μg, Total	1	12/04/08 23:50	
2,6-Dinitrotoluene	A	ND	1.1	10	μg, Total	1	12/04/08 23:50	
2-Chloronaphthalene	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
2-Chlorophenol	A	ND	0.7	10	μg, Total	1	12/04/08 23:50	
2-Methylnaphthalene	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
2-Methylphenol	A	ND	0.7	10	μg, Total	1	12/04/08 23:50	
2-Nitroaniline	A	ND	1	50	μg, Total	1	12/04/08 23:50	
2-Nitrophenol	A	ND	1	10	μg, Total	1	12/04/08 23:50	
3,3'-Dichlorobenzidine	A	ND	0.7	50	μg, Total	1	12/04/08 23:50	
3-Nitroaniline	A	ND	1.3	50	μg, Total	1	12/04/08 23:50	
3/4-Methylphenol	A	ND	0.8	10	μg, Total	1	12/04/08 23:50	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	μg, Total	1	12/04/08 23:50	
4-Bromophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
4-Chloro-3-methylphenol	A	ND	1.2	20	μg, Total	1	12/04/08 23:50	
4-Chloroaniline	A	ND	1	20	μg, Total	1	12/04/08 23:50	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
4-Nitroaniline	A	ND	1.7	50	μg, Total	1	12/04/08 23:50	
4-Nitrophenol	A	ND	4.3	50	μg, Total	1	12/04/08 23:50	
Bis(2-chloroethoxy)methane	A	ND	1	10	μg, Total	1	12/04/08 23:50	
Bis(2-chloroethyl)ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
Bis(2-ethylhexyl)phthalate	A	2	1.1	10	J μg, Total	1	12/04/08 23:50	
Butyl benzyl phthalate	A	ND	1	10	μg, Total	1	12/04/08 23:50	
Carbazole	A	ND	1.2	10	μg, Total	1	12/04/08 23:50	
Di-n-butyl phthalate	A	ND	1.2	10	μg, Total	1	12/04/08 23:50	
Di-n-octyl phthalate	A	ND	1.1	10	μg, Total	1	12/04/08 23:50	
Dibenzofuran	A	ND	0.8	10	μg, Total	1	12/04/08 23:50	
Diethyl phthalate	A	ND	1.1	10	μg, Total	1	12/04/08 23:50	
Dimethyl phthalate	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	
Hexachlorobenzene	A	ND	0.9	10	μg, Total	1	12/04/08 23:50	

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Page 19 of 30

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #6 TOX 2 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-06B
Collection Date: 11/21/08 13:00
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	12/04/08 23:50
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/04/08 23:50
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/04/08 23:50
Isophorone	A	3.3	1	10	J	µg, Total	1	12/04/08 23:50
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/04/08 23:50
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/04/08 23:50
Nitrobenzene	A	ND	1	10		µg, Total	1	12/04/08 23:50
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/04/08 23:50
Phenol	A	ND	0.4	10		µg, Total	1	12/04/08 23:50
<i>Surr: 2,4,6-Tribromophenol</i>	S	53.8	0	39.4-112		%REC	1	12/04/08 23:50
<i>Surr: 2-Fluorobiphenyl</i>	S	75.4	0	21.6-123		%REC	1	12/04/08 23:50
<i>Surr: 2-Fluorophenol</i>	S	53.3	0	27.7-78		%REC	1	12/04/08 23:50
<i>Surr: Nitrobenzene-d5</i>	S	78.6	0	36.9-89.6		%REC	1	12/04/08 23:50
<i>Surr: Phenol-d5</i>	S	65.0	0	46.1-73.5		%REC	1	12/04/08 23:50
<i>Surr: Terphenyl-d14</i>	S	70.3	0	55.8-111		%REC	1	12/04/08 23:50

PAHS BY GC/MS-SIM		Method: TO-13 Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/04/08 23:50
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/04/08 23:50
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/04/08 23:50
Benz[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/04/08 23:50
Benz[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/04/08 23:50
Benz[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/04/08 23:50
Benz[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/04/08 23:50
Benz[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/04/08 23:50
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/04/08 23:50
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/04/08 23:50
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/04/08 23:50
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/04/08 23:50
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	12/04/08 23:50
Naphthalene	A	4.2	0.16	1.0		µg, Total	1	12/04/08 23:50
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/04/08 23:50
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/04/08 23:50
<i>Surr: Nitrobenzene-d5</i>	S	78.6	0	36.9-89.6		%REC	1	12/04/08 23:50
<i>Surr: 2-Fluorobiphenyl</i>	S	75.4	0	21.6-123		%REC	1	12/04/08 23:50
<i>Surr: Terphenyl-d14</i>	S	70.3	0	55.8-111		%REC	1	12/04/08 23:50

9/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #7 TOX 2 Influent (Dup)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-07A
Collection Date: 11/21/08 13:20
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	14000	300	1000	ppbv	,00	12/05/08 09:28	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/05/08 10:50	
1,1,2-Trichloroethane	A	100	10	30	ppbv	60	12/05/08 10:50	
1,1-Dichloroethane	A	3000	42	150	ppbv	300	12/05/08 10:09	
1,1-Dichloroethene	A	76	10	30	ppbv	60	12/05/08 10:50	
1,2-Dichloroethane	A	420	10	30	ppbv	60	12/05/08 10:50	
1,2-Dichloropropane	A	110	8.4	30	ppbv	60	12/05/08 10:50	
2-Butanone	A	5100	36	590	ppbv	300	12/05/08 10:09	
2-Hexanone	A	ND	20	120	ppbv	60	12/05/08 10:50	
4-Methyl-2-Pentanone	A	2200	71	150	ppbv	300	12/05/08 10:09	
Acetone	A	6700	1100	4000	ppbv	,00	12/05/08 09:28	
Benzene	A	6500	240	1000	ppbv	,00	12/05/08 09:28	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/05/08 10:50	
Bromoform	A	ND	10	30	ppbv	60	12/05/08 10:50	
Bromomethane	A	ND	11	30	ppbv	60	12/05/08 10:50	
Carbon disulfide	A	ND	11	30	ppbv	60	12/05/08 10:50	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/05/08 10:50	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/05/08 10:50	
Chloroethane	A	230	10	30	ppbv	60	12/05/08 10:50	
Chloroform	A	1300	36	150	ppbv	300	12/05/08 10:09	
Chloromethane	A	25	14	120	J	ppbv	60	12/05/08 10:50
cis-1,2-Dichloroethene	A	2800	42	150	ppbv	300	12/05/08 10:09	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/05/08 10:50	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/05/08 10:50	
Ethyl benzene	A	5600	53	150	ppbv	300	12/05/08 10:09	
m,p-Xylene	A	20000	600	2000	ppbv	,00	12/05/08 09:28	
Methylene chloride	A	15000	280	8000	ppbv	,00	12/05/08 09:28	
o-Xylene	A	7500	340	1000	ppbv	,00	12/05/08 09:28	
Styrene	A	230	11	30	ppbv	60	12/05/08 10:50	
Tetrachloroethene	A	8000	340	1000	ppbv	,00	12/05/08 09:28	
Toluene	A	45000	730	2000	ppbv	,00	12/06/08 12:08	
trans-1,2-Dichloroethene	A	31	19	30	ppbv	60	12/05/08 10:50	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/05/08 10:50	
Trichloroethene	A	8100	320	1000	ppbv	,00	12/05/08 09:28	
Vinyl chloride	A	510	9	30	ppbv	60	12/05/08 10:50	
Surr: 4-Bromofluorobenzene	S	114	0	77.7-127	%REC	60	12/05/08 10:50	

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #7 TOX 2 Influent (Dup)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-07B
Collection Date: 11/21/08 13:20
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	Prep Date/Time: 11/25/08 11:15 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
1,2-Dichlorobenzene	A	7.3	0.7	10	J	µg, Total	1	12/05/08 00:14
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	12/05/08 00:14
1,4-Dichlorobenzene	A	1.2	0.9	10	J	µg, Total	1	12/05/08 00:14
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	12/05/08 00:14
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	12/05/08 00:14
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	12/05/08 00:14
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	12/05/08 00:14
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	12/05/08 00:14
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	12/05/08 00:14
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	12/05/08 00:14
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
2-Methylphenol	A	ND	0.7	10		µg, Total	1	12/05/08 00:14
2-Nitroaniline	A	ND	1	50		µg, Total	1	12/05/08 00:14
2-Nitrophenol	A	ND	1	10		µg, Total	1	12/05/08 00:14
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	12/05/08 00:14
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	12/05/08 00:14
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	12/05/08 00:14
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	12/05/08 00:14
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	12/05/08 00:14
4-Chloroaniline	A	ND	1	20		µg, Total	1	12/05/08 00:14
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	12/05/08 00:14
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	12/05/08 00:14
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	12/05/08 00:14
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
Bis(2-ethylhexyl)phthalate	A	8.1	1.1	10	J	µg, Total	1	12/05/08 00:14
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	12/05/08 00:14
Carbazole	A	ND	1.2	10		µg, Total	1	12/05/08 00:14
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	12/05/08 00:14
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	12/05/08 00:14
Dibenzofuran	A	ND	0.8	10		µg, Total	1	12/05/08 00:14
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	12/05/08 00:14
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	12/05/08 00:14

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11/3/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #7 TOX 2 Influent (Dup)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-07B
Collection Date: 11/21/08 13:20
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD Prep Date/Time: 11/25/08 11:15 Analyst: BEM							
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/05/08 00:14
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/05/08 00:14
Isophorone	A	3.4	1	10	J	µg, Total	1	12/05/08 00:14
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/05/08 00:14
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/05/08 00:14
Nitrobenzene	A	ND	1	10		µg, Total	1	12/05/08 00:14
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/05/08 00:14
Phenol	A	ND	0.4	10		µg, Total	1	12/05/08 00:14
Surr: 2,4,6-Tribromophenol	S	43.3	0	39.4-112		%REC	1	12/05/08 00:14
Surr: 2-Fluorobiphenyl	S	65.3	0	21.6-123		%REC	1	12/05/08 00:14
Surr: 2-Fluorophenol	S	46.8	0	27.7-78		%REC	1	12/05/08 00:14
Surr: Nitrobenzene-d5	S	67.4	0	36.9-89.6		%REC	1	12/05/08 00:14
Surr: Phenol-d5	S	56.6	0	46.1-73.5		%REC	1	12/05/08 00:14
Surr: Terphenyl-d14	S	64.2	0	55.8-111		%REC	1	12/05/08 00:14

PAHS BY GC/MS-SIM	Method: TO-13 Prep Date/Time: 11/25/08 11:15 Analyst: BEM							
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/05/08 00:14
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/05/08 00:14
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/05/08 00:14
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/05/08 00:14
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/05/08 00:14
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/05/08 00:14
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/05/08 00:14
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/05/08 00:14
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/05/08 00:14
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/05/08 00:14
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/05/08 00:14
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/05/08 00:14
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	12/05/08 00:14
Naphthalene	A	4.9	0.16	1.0		µg, Total	1	12/05/08 00:14
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/05/08 00:14
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/05/08 00:14
Surr: Nitrobenzene-d5	S	67.4	0	36.9-89.6		%REC	1	12/05/08 00:14
Surr: 2-Fluorobiphenyl	S	65.3	0	21.6-123		%REC	1	12/05/08 00:14
Surr: Terphenyl-d14	S	64.2	0	55.8-111		%REC	1	12/05/08 00:14

1/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #8 TOX 2 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-08A
Collection Date: 11/21/08 13:23
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	430	6.8	23		ppbv	50	12/04/08 20:29
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50		ppbv	1	12/04/08 21:51
1,1,2-Trichloroethane	A	3.7	0.17	0.50		ppbv	1	12/04/08 21:51
1,1-Dichloroethane	A	72	0.69	2.5		ppbv	5	12/04/08 21:10
1,1-Dichloroethene	A	74	0.84	2.5		ppbv	5	12/04/08 21:10
1,2-Dichloroethane	A	9.6	0.17	0.50		ppbv	1	12/04/08 21:51
1,2-Dichloropropane	A	2.3	0.14	0.50		ppbv	1	12/04/08 21:51
2-Butanone	A	130	5.5	91		ppbv	50	12/04/08 20:29
2-Hexanone	A	ND	0.34	2.0		ppbv	1	12/04/08 21:51
4-Methyl-2-Pentanone	A	40	1.2	2.5		ppbv	5	12/04/08 21:10
Acetone	A	290	25	91		ppbv	50	12/04/08 20:29
Benzene	A	300	5.5	23		ppbv	50	12/04/08 20:29
Bromodichloromethane	A	ND	0.15	0.50		ppbv	1	12/04/08 21:51
Bromoform	A	ND	0.17	0.50		ppbv	1	12/04/08 21:51
Bromomethane	A	ND	0.19	0.50		ppbv	1	12/04/08 21:51
Carbon disulfide	A	ND	0.18	0.50		ppbv	1	12/04/08 21:51
Carbon tetrachloride	A	0.49	0.16	0.50	J	ppbv	1	12/04/08 21:51
Chlorobenzene	A	ND	0.16	0.50		ppbv	1	12/04/08 21:51
Chloroethane	A	3.3	0.17	0.50		ppbv	1	12/04/08 21:51
Chloroform	A	35	0.59	2.5		ppbv	5	12/04/08 21:10
Chloromethane	A	5.8	0.23	2.0		ppbv	1	12/04/08 21:51
cis-1,2-Dichloroethene	A	73	0.69	2.5		ppbv	5	12/04/08 21:10
cis-1,3-Dichloropropene	A	ND	0.14	0.50		ppbv	1	12/04/08 21:51
Dibromochloromethane	A	ND	0.17	0.50		ppbv	1	12/04/08 21:51
Ethyl benzene	A	110	8.2	23		ppbv	50	12/04/08 20:29
m,p-Xylene	A	420	14	46		ppbv	50	12/04/08 20:29
Methylene chloride	A	510	6.4	180		ppbv	50	12/04/08 20:29
o-Xylene	A	160	7.7	23		ppbv	50	12/04/08 20:29
Styrene	A	16	0.19	0.50		ppbv	1	12/04/08 21:51
Tetrachloroethene	A	310	7.7	23		ppbv	50	12/04/08 20:29
Toluene	A	680	8.1	22		ppbv	100	12/05/08 12:23
trans-1,2-Dichloroethene	A	9.3	0.31	0.50		ppbv	1	12/04/08 21:51
trans-1,3-Dichloropropene	A	ND	0.12	0.50		ppbv	1	12/04/08 21:51
Trichloroethene	A	270	7.3	23		ppbv	50	12/04/08 20:29
Vinyl chloride	A	28	0.74	2.5		ppbv	5	12/04/08 21:10
Surr: 4-Bromofluorobenzene	S	101	0	77.7-127		%REC	1	12/04/08 21:51

1/13/09

ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #8 TOX 2 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-08B
Collection Date: 11/21/08 13:23
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD						Prep Date/Time:	11/25/08 11:15	Analyst:	BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	12/05/08 00:38			
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	12/05/08 00:38			
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	12/05/08 00:38			
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	12/05/08 00:38			
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	12/05/08 00:38			
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	12/05/08 00:38			
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	12/05/08 00:38			
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	12/05/08 00:38			
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	12/05/08 00:38			
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
2-Methylphenol	A	ND	0.7	10		µg, Total	1	12/05/08 00:38			
2-Nitroaniline	A	ND	1	50		µg, Total	1	12/05/08 00:38			
2-Nitrophenol	A	ND	1	10		µg, Total	1	12/05/08 00:38			
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	12/05/08 00:38			
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	12/05/08 00:38			
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	12/05/08 00:38			
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	12/05/08 00:38			
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	12/05/08 00:38			
4-Chloroaniline	A	ND	1	20		µg, Total	1	12/05/08 00:38			
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	12/05/08 00:38			
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	12/05/08 00:38			
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	12/05/08 00:38			
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
Bis(2-ethylhexyl)phthalate	A	2.9	1.1	10	J	µg, Total	1	12/05/08 00:38			
Butyl benzyl phthalate	A	1.1	1	10	J	µg, Total	1	12/05/08 00:38			
Carbazole	A	ND	1.2	10		µg, Total	1	12/05/08 00:38			
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	12/05/08 00:38			
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	12/05/08 00:38			
Dibenzofuran	A	ND	0.8	10		µg, Total	1	12/05/08 00:38			
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	12/05/08 00:38			
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	12/05/08 00:38			

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ANALYTICAL RESULTS

Date: Wednesday, December 10, 2008

Client: MWH, Inc.
Client Project: Nov 2008 - Monthly Air / ACS
Client Sample ID: #8 TOX 2 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0811841-08B
Collection Date: 11/21/08 13:23
Date Received: 11/21/08 15:34

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 11/25/08 11:15				Analyst: BEM
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	12/05/08 00:38	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	12/05/08 00:38	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	12/05/08 00:38	
Isophorone	A	ND	1	10	µg, Total	1	12/05/08 00:38	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	12/05/08 00:38	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	12/05/08 00:38	
Nitrobenzene	A	ND	1	10	µg, Total	1	12/05/08 00:38	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	12/05/08 00:38	
Phenol	A	ND	0.4	10	µg, Total	1	12/05/08 00:38	
<i>Surr: 2,4,6-Tribromophenol</i>	S	43.3	0	39.4-112	%REC	1	12/05/08 00:38	
<i>Surr: 2-Fluorobiphenyl</i>	S	60.7	0	21.6-123	%REC	1	12/05/08 00:38	
<i>Surr: 2-Fluorophenol</i>	S	54.0	0	27.7-78	%REC	1	12/05/08 00:38	
<i>Surr: Nitrobenzene-d5</i>	S	64.5	0	36.9-89.6	%REC	1	12/05/08 00:38	
<i>Surr: Phenol-d5</i>	S	58.3	0	46.1-73.5	%REC	1	12/05/08 00:38	
<i>Surr: Terphenyl-d14</i>	S	61.2	0	55.8-111	%REC	1	12/05/08 00:38	

PAHS BY GC/MS-SIM		Method: TO-13		Prep Date/Time: 11/25/08 11:15				Analyst: BEM
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	12/05/08 00:38	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	12/05/08 00:38	
Anthracene	A	ND	0.27	1.0	µg, Total	1	12/05/08 00:38	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	12/05/08 00:38	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	12/05/08 00:38	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	12/05/08 00:38	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	12/05/08 00:38	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	12/05/08 00:38	
Chrysene	A	ND	0.57	1.0	µg, Total	1	12/05/08 00:38	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	12/05/08 00:38	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	12/05/08 00:38	
Fluorene	A	ND	0.25	1.0	µg, Total	1	12/05/08 00:38	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	12/05/08 00:38	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	12/05/08 00:38	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	12/05/08 00:38	
Pyrene	A	ND	0.44	1.0	µg, Total	1	12/05/08 00:38	
<i>Surr: Nitrobenzene-d5</i>	S	64.5	0	36.9-89.6	%REC	1	12/05/08 00:38	
<i>Surr: 2-Fluorobiphenyl</i>	S	60.7	0	21.6-123	%REC	1	12/05/08 00:38	
<i>Surr: Terphenyl-d14</i>	S	61.2	0	55.8-111	%REC	1	12/05/08 00:38	

M/13/09

December 11, 2008 Off-Gas Sample Laboratory Results

ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #2 SBPA ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-01A
Collection Date: 12/11/08 10:29
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15			Prep Date/Time:		Analyst: MAK
1,1,1-Trichloroethane	A	12000	170	570	ppbv	,00	12/12/08 21:10
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/16/08 13:51
1,1,2-Trichloroethane	A	35	10	30	ppbv	60	12/16/08 13:51
1,1-Dichloroethane	A	3400	41	150	ppbv	300	12/12/08 23:54
1,1-Dichloroethene	A	170	10	30	ppbv	60	12/16/08 13:51
1,2-Dichloroethane	A	210	10	30	ppbv	60	12/16/08 13:51
1,2-Dichloropropane	A	190	8.4	30	ppbv	60	12/16/08 13:51
2-Butanone	A	920	7.2	120	ppbv	60	12/16/08 13:51
2-Hexanone	A	ND	20	120	ppbv	60	12/16/08 13:51
4-Methyl-2-Pentanone	A	970	14	30	ppbv	60	12/16/08 13:51
Acetone	A	1300	160	590	ppbv	300	12/12/08 23:54
Benzene	A	4900	35	150	ppbv	300	12/12/08 23:54
Bromodichloromethane	A	ND	9	30	ppbv	60	12/16/08 13:51
Bromoform	A	ND	10	30	ppbv	60	12/16/08 13:51
Bromomethane	A	ND	11	30	ppbv	60	12/16/08 13:51
Carbon disulfide	A	ND	11	30	ppbv	60	12/16/08 13:51
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/16/08 13:51
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/16/08 13:51
Chloroethane	A	380	10	30	ppbv	60	12/16/08 13:51
Chloroform	A	4300	35	150	ppbv	300	12/12/08 23:54
Chloromethane	A	ND	14	120	ppbv	60	12/16/08 13:51
cis-1,2-Dichloroethene	A	13000	160	570	ppbv	,00	12/12/08 21:10
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/16/08 13:51
Dibromochloromethane	A	ND	10	30	ppbv	60	12/16/08 13:51
Ethyl benzene	A	4100	53	150	ppbv	300	12/12/08 23:54
m,p-Xylene	A	12000	340	1100	ppbv	,00	12/12/08 21:10
Methylene chloride	A	6100	160	4600	ppbv	,00	12/12/08 21:10
o-Xylene	A	6000	190	570	ppbv	,00	12/12/08 21:10
Styrene	A	68	11	30	ppbv	60	12/16/08 13:51
Tetrachloroethene	A	12000	190	570	ppbv	,00	12/12/08 21:10
Toluene	A	14000	210	570	ppbv	,00	12/12/08 21:10
trans-1,2-Dichloroethene	A	130	19	30	ppbv	60	12/16/08 13:51
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/16/08 13:51
Trichloroethene	A	7800	180	570	ppbv	,00	12/12/08 21:10
Vinyl chloride	A	2000	44	150	ppbv	300	12/12/08 23:54
Surr: 4-Bromofluorobenzene	S	96.8	0	77.7-127	%REC	60	12/16/08 13:51

ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #3 TOX 1 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-02A
Collection Date: 12/11/08 10:56
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15		Prep Date/Time:		Analyst: MAK		
1,1,1-Trichloroethane	A	12000	170	560	ppbv	,000	12/12/08 20:29	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/16/08 13:09	
1,1,2-Trichloroethane	A	32	10	30	ppbv	60	12/16/08 13:09	
1,1-Dichloroethane	A	3400	42	150	ppbv	300	12/12/08 23:13	
1,1-Dichloroethene	A	170	10	30	ppbv	60	12/16/08 13:09	
1,2-Dichloroethane	A	200	10	30	ppbv	60	12/16/08 13:09	
1,2-Dichloropropane	A	180	8.4	30	ppbv	60	12/16/08 13:09	
2-Butanone	A	970	7.2	120	ppbv	60	12/16/08 13:09	
2-Hexanone	A	ND	20	120	ppbv	60	12/16/08 13:09	
4-Methyl-2-Pentanone	A	960	14	30	ppbv	60	12/16/08 13:09	
Acetone	A	2100	170	600	ppbv	300	12/12/08 23:13	
Benzene	A	5100	36	150	ppbv	300	12/12/08 23:13	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/16/08 13:09	
Bromoform	A	ND	10	30	ppbv	60	12/16/08 13:09	
Bromomethane	A	ND	11	30	ppbv	60	12/16/08 13:09	
Carbon disulfide	A	ND	11	30	ppbv	60	12/16/08 13:09	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/16/08 13:09	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/16/08 13:09	
Chloroethane	A	390	10	30	ppbv	60	12/16/08 13:09	
Chloroform	A	4400	36	150	ppbv	300	12/12/08 23:13	
Chloromethane	A	ND	14	120	ppbv	60	12/16/08 13:09	
cis-1,2-Dichloroethene	A	12000	160	560	ppbv	,000	12/12/08 20:29	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/16/08 13:09	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/16/08 13:09	
Ethyl benzene	A	4100	54	150	ppbv	300	12/12/08 23:13	
m,p-Xylene	A	12000	330	1100	ppbv	,000	12/12/08 20:29	14 B
Methylene chloride	A	6100	160	4400	ppbv	,000	12/12/08 20:29	
o-Xylene	A	5700	190	560	ppbv	,000	12/12/08 20:29	
Styrene	A	60	11	30	ppbv	60	12/16/08 13:09	
Tetrachloroethene	A	11000	190	560	ppbv	,000	12/12/08 20:29	
Toluene	A	14000	200	560	ppbv	,000	12/12/08 20:29	
trans-1,2-Dichloroethene	A	130	19	30	ppbv	60	12/16/08 13:09	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/16/08 13:09	
Trichloroethene	A	7700	180	560	ppbv	,000	12/12/08 20:29	
Vinyl chloride	A	2000	45	150	ppbv	300	12/12/08 23:13	
Surr: 4-Bromofluorobenzene	S	98.2	0	77.7-127	%REC	60	12/16/08 13:09	

(unlabeled)

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ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #4 TOX 1 Influent (DUP)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-03A
Collection Date: 12/11/08 11:18
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	12000	170	570	ppbv	3,000	12/12/08 19:48	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	12/13/08 02:06	
1,1,2-Trichloroethane	A	36	10	30	ppbv	60	12/13/08 02:06	
1,1-Dichloroethane	A	3300	42	150	ppbv	300	12/12/08 22:32	
1,1-Dichloroethene	A	180	10	30	ppbv	60	12/13/08 02:06	
1,2-Dichloroethane	A	220	10	30	ppbv	60	12/13/08 02:06	
1,2-Dichloropropane	A	200	8.4	30	ppbv	60	12/13/08 02:06	
2-Butanone	A	1100	7.2	120	ppbv	60	12/13/08 02:06	
2-Hexanone	A	ND	20	120	ppbv	60	12/13/08 02:06	
4-Methyl-2-Pentanone	A	1000	14	30	ppbv	60	12/13/08 02:06	
Acetone	A	1700	170	600	ppbv	300	12/12/08 22:32	
Benzene	A	4800	36	150	ppbv	300	12/12/08 22:32	
Bromodichloromethane	A	ND	9	30	ppbv	60	12/13/08 02:06	
Bromoform	A	ND	10	30	ppbv	60	12/13/08 02:06	
Bromomethane	A	ND	11	30	ppbv	60	12/13/08 02:06	
Carbon disulfide	A	ND	11	30	ppbv	60	12/13/08 02:06	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	12/13/08 02:06	
Chlorobenzene	A	ND	9.6	30	ppbv	60	12/13/08 02:06	
Chloroethane	A	410	10	30	ppbv	60	12/13/08 02:06	J
Chloroform	A	4200	36	150	ppbv	300	12/12/08 22:32	
Chloromethane	A	ND	14	120	ppbv	60	12/13/08 02:06	
cis-1,2-Dichloroethene	A	12000	160	570	ppbv	3,000	12/12/08 19:48	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	12/13/08 02:06	
Dibromochloromethane	A	ND	10	30	ppbv	60	12/13/08 02:06	
Ethyl benzene	A	4000	54	150	ppbv	300	12/12/08 22:32	
m,p-Xylene	A	13000	340	1100	ppbv	3,000	12/12/08 19:48	
Methylene chloride	A	5700	160	4600	ppbv	3,000	12/12/08 19:48	UB
o-Xylene	A	6100	190	570	ppbv	3,000	12/12/08 19:48	
Styrene	A	70	11	30	ppbv	60	12/13/08 02:06	
Tetrachloroethene	A	12000	190	570	ppbv	3,000	12/12/08 19:48	
Toluene	A	14000	210	570	ppbv	3,000	12/12/08 19:48	
trans-1,2-Dichloroethene	A	140	19	30	ppbv	60	12/13/08 02:06	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	12/13/08 02:06	
Trichloroethene	A	7500	180	570	ppbv	3,000	12/12/08 19:48	
Vinyl chloride	A	1900	45	150	ppbv	300	12/12/08 22:32	
Surr: 4-Bromofluorobenzene	S	100	0	77.7-127	%REC	60	12/13/08 02:06	



ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #5 TOC I Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-04A
Collection Date: 12/11/08 11:40
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15			Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	87	0.74	2.5	ppbv	5	12/12/08 21:51	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	12/13/08 00:38	
1,1,2-Trichloroethane	A	ND	0.17	0.50	ppbv	1	12/13/08 00:38	
1,1-Dichloroethane	A	19	0.14	0.50	ppbv	1	12/13/08 00:38	
1,1-Dichloroethene	A	29	0.84	2.5	ppbv	5	12/12/08 21:51	
1,2-Dichloroethane	A	ND	0.17	0.50	ppbv	1	12/13/08 00:38	
1,2-Dichloropropane	A	ND	0.14	0.50	ppbv	1	12/13/08 00:38	
2-Butanone	A	8.8	0.12	2.0	ppbv	1	12/13/08 00:38	
2-Hexanone	A	1.1	0.34	2.0	J ppbv	1	12/13/08 00:38	
4-Methyl-2-Pentanone	A	5.7	0.24	0.50	ppbv	1	12/13/08 00:38	
Acetone	A	23	2.8	9.9	ppbv	5	12/12/08 21:51	
Benzene	A	47	0.59	2.5	ppbv	5	12/12/08 21:51	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	12/13/08 00:38	
Bromoform	A	ND	0.17	0.50	ppbv	1	12/13/08 00:38	
Bromomethane	A	ND	0.19	0.50	ppbv	1	12/13/08 00:38	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	12/13/08 00:38	
Carbon tetrachloride	A	ND	0.16	0.50	ppbv	1	12/13/08 00:38	
Chlorobenzene	A	ND	0.16	0.50	ppbv	1	12/13/08 00:38	
Chloroethane	A	1.1	0.17	0.50	ppbv	1	12/13/08 00:38	
Chloroform	A	25	0.59	2.5	ppbv	5	12/12/08 21:51	
Chloromethane	A	2.1	0.23	2.0	ppbv	1	12/13/08 00:38	
cis-1,2-Dichloroethene	A	67	5.4	19	ppbv	50	12/12/08 19:07	
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	12/13/08 00:38	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	12/13/08 00:38	
Ethyl benzene	A	31	0.89	2.5	ppbv	5	12/12/08 21:51	
m,p-Xylene	A	130	1.5	5.0	ppbv	5	12/12/08 21:51	
Methylene chloride	A	52	0.69	20	ppbv	5	12/12/08 21:51	
o-Xylene	A	57	0.84	2.5	ppbv	5	12/12/08 21:51	
Styrene	A	3.4	0.19	0.50	ppbv	1	12/13/08 00:38	
Tetrachloroethene	A	87	6.5	19	ppbv	50	12/12/08 19:07	
Toluene	A	92	6.9	19	ppbv	50	12/12/08 19:07	
trans-1,2-Dichloroethene	A	8.8	0.31	0.50	ppbv	1	12/13/08 00:38	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	12/13/08 00:38	
Trichloroethene	A	71	0.79	2.5	ppbv	5	12/12/08 21:51	
Vinyl chloride	A	20	0.74	2.5	ppbv	5	12/12/08 21:51	
Surr: 4-Bromofluorobenzene	S	95.8	0	77.7-127	%REC	1	12/13/08 00:38	

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ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #2 SBPA ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-01B
Collection Date: 12/11/08 10:29
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	Prep Date/Time: 12/18/08 13:06 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
1,2-Dichlorobenzene	A	4.9	0.7	10	J	μg, Total	1	12/19/08 22:16
1,3-Dichlorobenzene	A	ND	0.8	10	μg, Total	1	12/19/08 22:16	
1,4-Dichlorobenzene	A	1.4	0.9	10	J	μg, Total	1	12/19/08 22:16
2,4,5-Trichlorophenol	A	ND	1.5	10	μg, Total	1	12/19/08 22:16	
2,4,6-Trichlorophenol	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
2,4-Dichlorophenol	A	ND	0.7	10	μg, Total	1	12/19/08 22:16	
2,4-Dimethylphenol	A	ND	0.8	10	μg, Total	1	12/19/08 22:16	
2,4-Dinitrophenol	A	ND	9.4	50	μg, Total	1	12/19/08 22:16	
2,4-Dinitrotoluene	A	ND	0.8	10	μg, Total	1	12/19/08 22:16	
2,6-Dinitrotoluene	A	ND	1.1	10	μg, Total	1	12/19/08 22:16	
2-Chloronaphthalene	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
2-Chlorophenol	A	ND	0.7	10	μg, Total	1	12/19/08 22:16	
2-Methylnaphthalene	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
2-Methylphenol	A	ND	0.7	10	μg, Total	1	12/19/08 22:16	
2-Nitroaniline	A	ND	1	50	μg, Total	1	12/19/08 22:16	
2-Nitrophenol	A	ND	1	10	μg, Total	1	12/19/08 22:16	
3,3'-Dichlorobenzidine	A	ND	0.7	50	μg, Total	1	12/19/08 22:16	
3-Nitroaniline	A	ND	1.3	50	μg, Total	1	12/19/08 22:16	
3/4-Methylphenol	A	ND	0.8	10	μg, Total	1	12/19/08 22:16	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	μg, Total	1	12/19/08 22:16	
4-Bromophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
4-Chloro-3-methylphenol	A	ND	1.2	20	μg, Total	1	12/19/08 22:16	
4-Chloroaniline	A	ND	1	20	μg, Total	1	12/19/08 22:16	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
4-Nitroaniline	A	ND	1.7	50	μg, Total	1	12/19/08 22:16	
4-Nitrophenol	A	ND	4.3	50	μg, Total	1	12/19/08 22:16	
Bis(2-chloroethoxy)methane	A	ND	1	10	μg, Total	1	12/19/08 22:16	
Bis(2-chloroethyl)ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10	μg, Total	1	12/19/08 22:16	
Butyl benzyl phthalate	A	ND	1	10	μg, Total	1	12/19/08 22:16	
Carbazole	A	ND	1.2	10	μg, Total	1	12/19/08 22:16	
Di-n-butyl phthalate	A	ND	1.2	10	μg, Total	1	12/19/08 22:16	
Di-n-octyl phthalate	A	ND	1.1	10	μg, Total	1	12/19/08 22:16	
Dibenzofuran	A	ND	0.8	10	μg, Total	1	12/19/08 22:16	
Diethyl phthalate	A	ND	1.1	10	μg, Total	1	12/19/08 22:16	
Dimethyl phthalate	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	
1,2-Dichlorobenzene	A	ND	0.9	10	μg, Total	1	12/19/08 22:16	

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ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #2 SBPA ISVE
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-01B
Collection Date: 12/11/08 10:29
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD		Prep Date/Time: 12/18/08 13:06 Analyst: BEM						
Hexachlorobutadiene	A	2.2	0.9	10	J	µg, Total	1	12/19/08 22:16
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	12/19/08 22:16
Hexachloroethane	A	ND	0.9	10		µg, Total	1	12/19/08 22:16
Isophorone	A	1.2	1	10	J	µg, Total	1	12/19/08 22:16
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	12/19/08 22:16
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	12/19/08 22:16
Nitrobenzene	A	ND	1	10		µg, Total	1	12/19/08 22:16
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	12/19/08 22:16
Phenol	A	ND	0.4	10		µg, Total	1	12/19/08 22:16
Surr: 2,4,6-Tribromophenol	S	45.4	0	39.4-112		%REC	1	12/19/08 22:16
Surr: 2-Fluorobiphenyl	S	52.7	0	21.6-123		%REC	1	12/19/08 22:16
Surr: 2-Fluorophenol	S	48.2	0	27.7-78		%REC	1	12/19/08 22:16
Surr: Nitrobenzene-d5	S	56.1	0	36.9-89.6		%REC	1	12/19/08 22:16
Surr: Phenol-d5	S	52.1	0	46.1-73.5		%REC	1	12/19/08 22:16
Surr: Terphenyl-d14	S	62.4	0	55.8-111		%REC	1	12/19/08 22:16

PAHS BY GC/MS-SIM Method: TO-13		Prep Date/Time: 12/18/08 13:06 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	12/19/08 22:16
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	12/19/08 22:16
Anthracene	A	ND	0.27	1.0		µg, Total	1	12/19/08 22:16
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	12/19/08 22:16
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	12/19/08 22:16
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	12/19/08 22:16
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	12/19/08 22:16
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	12/19/08 22:16
Chrysene	A	ND	0.57	1.0		µg, Total	1	12/19/08 22:16
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	12/19/08 22:16
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	12/19/08 22:16
Fluorene	A	ND	0.25	1.0		µg, Total	1	12/19/08 22:16
Indeno[1,2,3cd]pyrene	A	0.57	0.56	1.0	Jb	µg, Total	1	12/19/08 22:16
Naphthalene	A	3.0	0.16	1.0		µg, Total	1	12/19/08 22:16
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	12/19/08 22:16
Pyrene	A	ND	0.44	1.0		µg, Total	1	12/19/08 22:16
Surr: Nitrobenzene-d5	S	56.1	0	36.9-89.6		%REC	1	12/19/08 22:16
Surr: 2-Fluorobiphenyl	S	52.7	0	21.6-123		%REC	1	12/19/08 22:16
Surr: Terphenyl-d14	S	62.4	0	55.8-111		%REC	1	12/19/08 22:16

MMO/2909

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ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #3 TOX 1 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-02B
Collection Date: 12/11/08 10:56
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD			Prep Date/Time:	12/18/08 13:06	Analyst:	BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	UJ
1,2-Dichlorobenzene	A	ND	0.7	10	µg, Total	1	12/19/08 22:34	
1,3-Dichlorobenzene	A	ND	0.8	10	µg, Total	1	12/19/08 22:34	
1,4-Dichlorobenzene	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
2,4,5-Trichlorophenol	A	ND	1.5	10	µg, Total	1	12/19/08 22:34	
2,4,6-Trichlorophenol	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
2,4-Dichlorophenol	A	ND	0.7	10	µg, Total	1	12/19/08 22:34	
2,4-Dimethylphenol	A	ND	0.8	10	µg, Total	1	12/19/08 22:34	
2,4-Dinitrophenol	A	ND	9.4	50	µg, Total	1	12/19/08 22:34	
2,4-Dinitrotoluene	A	ND	0.8	10	µg, Total	1	12/19/08 22:34	
2,6-Dinitrotoluene	A	ND	1.1	10	µg, Total	1	12/19/08 22:34	
2-Chloronaphthalene	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
2-Chlorophenol	A	ND	0.7	10	µg, Total	1	12/19/08 22:34	
2-Methylnaphthalene	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
2-Methylphenol	A	ND	0.7	10	µg, Total	1	12/19/08 22:34	
2-Nitroaniline	A	ND	1	50	µg, Total	1	12/19/08 22:34	
2-Nitrophenol	A	ND	1	10	µg, Total	1	12/19/08 22:34	
3,3'-Dichlorobenzidine	A	ND	0.7	50	µg, Total	1	12/19/08 22:34	
3-Nitroaniline	A	ND	1.3	50	µg, Total	1	12/19/08 22:34	
3/4-Methylphenol	A	ND	0.8	10	µg, Total	1	12/19/08 22:34	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	µg, Total	1	12/19/08 22:34	
4-Bromophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
4-Chloro-3-methylphenol	A	ND	1.2	20	µg, Total	1	12/19/08 22:34	
4-Chloroaniline	A	ND	1	20	µg, Total	1	12/19/08 22:34	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
4-Nitroaniline	A	ND	1.7	50	µg, Total	1	12/19/08 22:34	
4-Nitrophenol	A	ND	4.3	50	µg, Total	1	12/19/08 22:34	
Bis(2-chloroethoxy)methane	A	ND	1	10	µg, Total	1	12/19/08 22:34	
Bis(2-chloroethyl)ether	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
Bis(2-ethylhexyl)phthalate	A	11	1.1	10	b	µg, Total	1	12/19/08 22:34
Butyl benzyl phthalate	A	1.8	1	10	J	µg, Total	1	12/19/08 22:34
Carbazole	A	ND	1.2	10		µg, Total	1	12/19/08 22:34
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	12/19/08 22:34
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	12/19/08 22:34
Dibenzofuran	A	ND	0.8	10		µg, Total	1	12/19/08 22:34
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	12/19/08 22:34
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	12/19/08 22:34
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	12/19/08 22:34

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ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #3 TOX 1 Influent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-02B
Collection Date: 12/11/08 10:56
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD						
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	UJ
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	12/19/08 22:34	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	12/19/08 22:34	
Isophorone	A	ND	1	10	µg, Total	1	12/19/08 22:34	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	12/19/08 22:34	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	12/19/08 22:34	
Nitrobenzene	A	ND	1	10	µg, Total	1	12/19/08 22:34	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	12/19/08 22:34	
Phenol	A	ND	0.4	10	µg, Total	1	12/19/08 22:34	
Surr: 2,4,6-Tribromophenol	S	50.9	0	39.4-112	%REC	1	12/19/08 22:34	
Surr: 2-Fluorobiphenyl	S	48.9	0	21.6-123	%REC	1	12/19/08 22:34	
Surr: 2-Fluorophenol	S	39.3	0	27.7-78	%REC	1	12/19/08 22:34	
Surr: Nitrobenzene-d5	S	49.8	0	36.9-89.6	%REC	1	12/19/08 22:34	
Surr: Phenol-d5	S	45.5	0	46.1-73.5	S %REC	1	12/19/08 22:34	
Surr: Terphenyl-d14	S	77.6	0	55.8-111	%REC	1	12/19/08 22:34	

PAHS BY GC/MS-SIM	Method:	TO-13						
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	12/19/08 22:34	UJ
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	12/19/08 22:34	
Anthracene	A	ND	0.27	1.0	µg, Total	1	12/19/08 22:34	
Benz[a]anthracene	A	ND	0.47	1.0	µg, Total	1	12/19/08 22:34	
Benz[a]pyrene	A	ND	0.38	1.0	µg, Total	1	12/19/08 22:34	
Benz[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	12/19/08 22:34	
Benz[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	12/19/08 22:34	
Benz[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	12/19/08 22:34	
Chrysene	A	ND	0.57	1.0	µg, Total	1	12/19/08 22:34	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	12/19/08 22:34	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	12/19/08 22:34	
Fluorene	A	ND	0.25	1.0	µg, Total	1	12/19/08 22:34	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	12/19/08 22:34	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	12/19/08 22:34	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	12/19/08 22:34	
Pyrene	A	ND	0.44	1.0	µg, Total	1	12/19/08 22:34	
Surr: Nitrobenzene-d5	S	49.8	0	36.9-89.6	%REC	1	12/19/08 22:34	
Surr: 2-Fluorobiphenyl	S	48.9	0	21.6-123	%REC	1	12/19/08 22:34	
Surr: Terphenyl-d14	S	77.6	0	55.8-111	%REC	1	12/19/08 22:34	

ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #4 TOX I Influent (DUP)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-03B
Collection Date: 12/11/08 11:18
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD	Prep Date/Time: 12/18/08 13:06 Analyst: BEM					
1,2,4-Trichlorobenzene	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	WJ
1,2-Dichlorobenzene	A	0.94	0.7	10	J	μg, Total	1	12/19/08 22:53
1,3-Dichlorobenzene	A	ND	0.8	10	μg, Total	1	12/19/08 22:53	J
1,4-Dichlorobenzene	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	WJ
2,4,5-Trichlorophenol	A	ND	1.5	10	μg, Total	1	12/19/08 22:53	
2,4,6-Trichlorophenol	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
2,4-Dichlorophenol	A	ND	0.7	10	μg, Total	1	12/19/08 22:53	
2,4-Dimethylphenol	A	ND	0.8	10	μg, Total	1	12/19/08 22:53	
2,4-Dinitrophenol	A	ND	9.4	50	μg, Total	1	12/19/08 22:53	
2,4-Dinitrotoluene	A	ND	0.8	10	μg, Total	1	12/19/08 22:53	
2,6-Dinitrotoluene	A	ND	1.1	10	μg, Total	1	12/19/08 22:53	
2-Chloronaphthalene	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
2-Chlorophenol	A	ND	0.7	10	μg, Total	1	12/19/08 22:53	
2-Methylnaphthalene	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
2-Methylphenol	A	ND	0.7	10	μg, Total	1	12/19/08 22:53	
2-Nitroaniline	A	ND	1	50	μg, Total	1	12/19/08 22:53	
2-Nitrophenol	A	ND	1	10	μg, Total	1	12/19/08 22:53	
3,3'-Dichlorobenzidine	A	ND	0.7	50	μg, Total	1	12/19/08 22:53	
3-Nitroaniline	A	ND	1.3	50	μg, Total	1	12/19/08 22:53	
3/4-Methylphenol	A	ND	0.8	10	μg, Total	1	12/19/08 22:53	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	μg, Total	1	12/19/08 22:53	
4-Bromophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
4-Chloro-3-methylphenol	A	ND	1.2	20	μg, Total	1	12/19/08 22:53	
4-Chloroaniline	A	ND	1	20	μg, Total	1	12/19/08 22:53	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
4-Nitroaniline	A	ND	1.7	50	μg, Total	1	12/19/08 22:53	
4-Nitrophenol	A	ND	4.3	50	μg, Total	1	12/19/08 22:53	
Bis(2-chloroethoxy)methane	A	ND	1	10	μg, Total	1	12/19/08 22:53	
Bis(2-chloroethyl)ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
Bis(2-ethylhexyl)phthalate	A	2.5	1.1	10	Jb	μg, Total	1	12/19/08 22:53
Butyl benzyl phthalate	A	ND	1	10	μg, Total	1	12/19/08 22:53	
Carbazole	A	ND	1.2	10	μg, Total	1	12/19/08 22:53	
Di-n-butyl phthalate	A	ND	1.2	10	μg, Total	1	12/19/08 22:53	
Di-n-octyl phthalate	A	ND	1.1	10	μg, Total	1	12/19/08 22:53	
Dibenzofuran	A	ND	0.8	10	μg, Total	1	12/19/08 22:53	
Diethyl phthalate	A	ND	1.1	10	μg, Total	1	12/19/08 22:53	
Dimethyl phthalate	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	
1,2-dichlorobenzene	A	ND	0.9	10	μg, Total	1	12/19/08 22:53	

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WJ WJB WJ

ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #4 TOX 1 Influent (DUP)
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-03B
Collection Date: 12/11/08 11:18
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 12/18/08 13:06				Analyst: BEM
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	12/19/08 22:53	WJ
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	12/19/08 22:53	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	12/19/08 22:53	
Isophorone	A	ND	1	10	µg, Total	1	12/19/08 22:53	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	12/19/08 22:53	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	12/19/08 22:53	
Nitrobenzene	A	ND	1	10	µg, Total	1	12/19/08 22:53	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	12/19/08 22:53	
Phenol	A	ND	0.4	10	µg, Total	1	12/19/08 22:53	
Surr: 2,4,6-Tribromophenol	S	52.2	0	39.4-112	%REC	1	12/19/08 22:53	
Surr: 2-Fluorobiphenyl	S	57.0	0	21.6-123	%REC	1	12/19/08 22:53	
Surr: 2-Fluorophenol	S	51.3	0	27.7-78	%REC	1	12/19/08 22:53	
Surr: Nitrobenzene-d5	S	62.8	0	36.9-89.6	%REC	1	12/19/08 22:53	
Surr: Phenol-d5	S	56.0	0	46.1-73.5	%REC	1	12/19/08 22:53	
Surr: Terphenyl-d14	S	77.1	0	55.8-111	%REC	1	12/19/08 22:53	

PAHS BY GC/MS-SIM		Method: TO-13		Prep Date/Time: 12/18/08 13:06				Analyst: BEM
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	12/19/08 22:53	WJ
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	12/19/08 22:53	
Anthracene	A	ND	0.27	1.0	µg, Total	1	12/19/08 22:53	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	12/19/08 22:53	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	12/19/08 22:53	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	12/19/08 22:53	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	12/19/08 22:53	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	12/19/08 22:53	
Chrysene	A	ND	0.57	1.0	µg, Total	1	12/19/08 22:53	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	12/19/08 22:53	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	12/19/08 22:53	
Fluorene	A	ND	0.25	1.0	µg, Total	1	12/19/08 22:53	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	12/19/08 22:53	
Naphthalene	A	0.23	0.16	1.0	J	µg, Total	1	12/19/08 22:53
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	12/19/08 22:53	
Pyrene	A	ND	0.44	1.0	µg, Total	1	12/19/08 22:53	
Surr: Nitrobenzene-d5	S	62.8	0	36.9-89.6	%REC	1	12/19/08 22:53	
Surr: 2-Fluorobiphenyl	S	57.0	0	21.6-123	%REC	1	12/19/08 22:53	
Surr: Terphenyl-d14	S	77.1	0	55.8-111	%REC	1	12/19/08 22:53	

WJ 01/29/09

ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #5 TOC 1 Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-04B
Collection Date: 12/11/08 11:40
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	Prep Date/Time: 12/18/08 13:06 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
1,2-Dichlorobenzene	A	ND	0.7	10	µg, Total	1	12/19/08 23:12	
1,3-Dichlorobenzene	A	ND	0.8	10	µg, Total	1	12/19/08 23:12	
1,4-Dichlorobenzene	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
2,4,5-Trichlorophenol	A	ND	1.5	10	µg, Total	1	12/19/08 23:12	
2,4,6-Trichlorophenol	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
2,4-Dichlorophenol	A	ND	0.7	10	µg, Total	1	12/19/08 23:12	
2,4-Dimethylphenol	A	ND	0.8	10	µg, Total	1	12/19/08 23:12	
2,4-Dinitrophenol	A	ND	9.4	50	µg, Total	1	12/19/08 23:12	
2,4-Dinitrotoluene	A	ND	0.8	10	µg, Total	1	12/19/08 23:12	
2,6-Dinitrotoluene	A	ND	1.1	10	µg, Total	1	12/19/08 23:12	
2-Chloronaphthalene	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
2-Chlorophenol	A	ND	0.7	10	µg, Total	1	12/19/08 23:12	
2-Methylnaphthalene	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
2-Methylphenol	A	ND	0.7	10	µg, Total	1	12/19/08 23:12	
2-Nitroaniline	A	ND	1	50	µg, Total	1	12/19/08 23:12	
2-Nitrophenol	A	ND	1	10	µg, Total	1	12/19/08 23:12	
3,3'-Dichlorobenzidine	A	ND	0.7	50	µg, Total	1	12/19/08 23:12	
3-Nitroaniline	A	ND	1.3	50	µg, Total	1	12/19/08 23:12	
3/4-Methylphenol	A	ND	0.8	10	µg, Total	1	12/19/08 23:12	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	µg, Total	1	12/19/08 23:12	
4-Bromophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
4-Chloro-3-methylphenol	A	ND	1.2	20	µg, Total	1	12/19/08 23:12	
4-Chloroaniline	A	ND	1	20	µg, Total	1	12/19/08 23:12	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
4-Nitroaniline	A	ND	1.7	50	µg, Total	1	12/19/08 23:12	
4-Nitrophenol	A	ND	4.3	50	µg, Total	1	12/19/08 23:12	
Bis(2-chloroethoxy)methane	A	ND	1	10	µg, Total	1	12/19/08 23:12	
Bis(2-chloroethyl)ether	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	µg, Total	1	12/19/08 23:12	
Bis(2-ethylhexyl)phthalate	A	2.1	1.1	10	Jb	µg, Total	1	12/19/08 23:12
Butyl benzyl phthalate	A	ND	1	10	ug, Total	1	12/19/08 23:12	
Carbazole	A	ND	1.2	10	ug, Total	1	12/19/08 23:12	
Di-n-butyl phthalate	A	ND	1.2	10	ug, Total	1	12/19/08 23:12	
Di-n-octyl phthalate	A	ND	1.1	10	ug, Total	1	12/19/08 23:12	
Dibenzofuran	A	ND	0.8	10	ug, Total	1	12/19/08 23:12	
Diethyl phthalate	A	ND	1.1	10	ug, Total	1	12/19/08 23:12	
Dimethyl phthalate	A	ND	0.9	10	ug, Total	1	12/19/08 23:12	
Hexachlorobenzene	A	ND	0.9	10	ug, Total	1	12/19/08 23:12	

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10/29/09



ANALYTICAL RESULTS

Date: Tuesday, December 30, 2008

Client: MWH, Inc.
Client Project: Dec 2008 - Monthly Air / ACS
Client Sample ID: #5 TOC I Effluent
Sample Description:
Sample Matrix: Air

Work Order / ID: ME0812510-04B
Collection Date: 12/11/08 11:40
Date Received: 12/11/08 14:05

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD		Prep Date/Time: 12/18/08 13:06 Analyst: BEM					
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	12/19/08 23:12
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	12/19/08 23:12
Hexachloroethane	A	ND	0.9	10	µg, Total	1	12/19/08 23:12
Isophorone	A	ND	1	10	µg, Total	1	12/19/08 23:12
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	12/19/08 23:12
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	12/19/08 23:12
Nitrobenzene	A	ND	1	10	µg, Total	1	12/19/08 23:12
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	12/19/08 23:12
Phenol	A	ND	0.4	10	µg, Total	1	12/19/08 23:12
Surr: 2,4,6-Tribromophenol	S	53.2	0	39.4-112	%REC	1	12/19/08 23:12
Surr: 2-Fluorobiphenyl	S	57.9	0	21.6-123	%REC	1	12/19/08 23:12
Surr: 2-Fluorophenol	S	51.9	0	27.7-78	%REC	1	12/19/08 23:12
Surr: Nitrobenzene-d5	S	64.4	0	36.9-89.6	%REC	1	12/19/08 23:12
Surr: Phenol-d5	S	55.6	0	46.1-73.5	%REC	1	12/19/08 23:12
Surr: Terphenyl-d14	S	73.9	0	55.8-111	%REC	1	12/19/08 23:12

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WJ

WJ

PAHS BY GC/MS-SIM Method: TO-13		Prep Date/Time: 12/18/08 13:06 Analyst: BEM					
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	12/19/08 23:12
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	12/19/08 23:12
Anthracene	A	ND	0.27	1.0	µg, Total	1	12/19/08 23:12
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	12/19/08 23:12
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	12/19/08 23:12
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	12/19/08 23:12
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	12/19/08 23:12
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	12/19/08 23:12
Chrysene	A	ND	0.57	1.0	µg, Total	1	12/19/08 23:12
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	12/19/08 23:12
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	12/19/08 23:12
Fluorene	A	ND	0.25	1.0	µg, Total	1	12/19/08 23:12
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	12/19/08 23:12
Naphthalene	A	ND	0.16	1.0	µg, Total	1	12/19/08 23:12
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	12/19/08 23:12
Pyrene	A	ND	0.44	1.0	µg, Total	1	12/19/08 23:12
Surr: Nitrobenzene-d5	S	64.4	0	36.9-89.6	%REC	1	12/19/08 23:12
Surr: 2-Fluorobiphenyl	S	57.9	0	21.6-123	%REC	1	12/19/08 23:12
Surr: Terphenyl-d14	S	73.9	0	55.8-111	%REC	1	12/19/08 23:12

12/19/08 09

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APPENDIX C

ANNUAL SEDIMENT SAMPLE ANALYTICAL DATA

November 25, 2008



ANALYTICAL RESULTS

Date: Thursday, December 04, 2008

Client: MWH, Inc.
Client Project: ACS - Griffith
Client Sample ID: ACSW-Sediment-2008
Sample Description:
Sample Matrix: Soil

Work Order / ID: ME0811949-01
Collection Date: 11/25/08 12:45
Date Received: 11/25/08 14:05

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
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PCB'S	Method: SW8082			Prep Date/Time: 12/02/08 10:25 Analyst: JLW			
Aroclor 1016	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1221	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1232	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1242	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1248	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1254	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1260	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1262	A	ND	99	µg/Kg	1	12/02/08 19:20	
Aroclor 1268	A	ND	99	µg/Kg	1	12/02/08 19:20	
Surr: Tetrachloro-m-xylene	S	95.8	19.9-131	%REC	1	12/02/08 19:20	
Surr: Decachlorobiphenyl	S	85.7	17.9-149	%REC	1	12/02/08 19:20	

11/19/09



ANALYTICAL RESULTS

Date: Thursday, December 04, 2008

Client: MWH, Inc.
Client Project: ACS - Griffith
Client Sample ID: ACS-Seddup-01-2008
Sample Description:
Sample Matrix: Soil

Work Order / ID: ME0811949-02
Collection Date: 11/25/08 12:50
Date Received: 11/25/08 14:05

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
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PCB'S	Method: SW8082			Prep Date/Time: 12/02/08 10:25 Analyst: JLW			
Aroclor 1016	A	ND	99		µg/Kg	1	12/02/08 19:44
Aroclor 1221	A	ND	99		µg/Kg	1	12/02/08 19:44
Aroclor 1232	A	ND	99		µg/Kg	1	12/02/08 19:44
Aroclor 1242	A	ND	99		µg/Kg	1	12/02/08 19:44
Aroclor 1248	A	580	99		µg/Kg	1	12/02/08 19:44
Aroclor 1254	A	280	99		µg/Kg	1	12/02/08 19:44
Aroclor 1260	A	ND	99		µg/Kg	1	12/02/08 19:44
Aroclor 1262	A	ND	99		µg/Kg	1	12/02/08 19:44
Aroclor 1268	A	ND	99		µg/Kg	1	12/02/08 19:44
Surr: Tetrachloro-m-xylene	S	81.4	19.9-131		%REC	1	12/02/08 19:44
Surr: Decachlorobiphenyl	S	86.5	17.9-149		%REC	1	12/02/08 19:44